



Cumberland HCP

NEWSLETTER VOLUME 2, ISSUE 3 SUMMER 2009

SPECIAL POINTS OF INTEREST:

- After 3 1/2 years, the Cumberland HCP bids farewell to its outreach coordinator, Emily Woodle. Among many things, she helped build a strong coalition of participants who will continue to successfully develop 2 HCPs in the Cumberlands. She will be continuing her career at the City of Knoxville's Department of Community Development. The DT is actively seeking a new outreach coordinator. Contact Dave Ostermeier for the job announcement (daveo@utk.edu).

INSIDE THIS ISSUE:

NCFRHCP Update	2
WRHCP Update	3
HCP Spotlight	2-3
SAC News	4
Featured Species	4
White-nose syndrome	5
HCP Artwork	5
Upcoming Events	6
USFWS News	6
What is a HCP?	6

FOR MORE INFORMATION ABOUT THE CUMBERLAND HCP PROJECT CONTACT: AWYSS@TNC.ORG

Notes from Alex Wyss, Cumberland HCP project director

The current and future success of the Cumberland HCP initiative rests on keen resolve of the private citizens, elected officials, and land managers, to name a few of the local participants. I've come to realize this in countless meetings during the last several years from Scott to Cumberland Counties and Wartburg to Crossville. What I find most admirable in these individuals is not only that they have dedicated their personal time to participate in HCP planning, but also that they remain patiently resolved to advance this initiative--particularly members of the technical and steering committees. Due to a considerable amount of patience and willingness to give this innovative process the benefit of doubt, they all have exhibited leadership that fuels the progress of the project and enables us to

continue to break new ground as we develop the first multi-species HCPs in Tennessee.

Most recently, I observed such dedicated local leadership when I attended a meeting of the Water Resources HCP Outreach Team. Comprised of local landowners, businesses and local government representatives and supported by the project Outreach Coordinator, the team is crafting outreach strategies and messages for the Water Resources HCP. Why is this team such a critical voice to this HCP? Simply put, only local stakeholders can best communicate the need and benefits of the Cumberland communities' participation in as complex undertaking as an HCP. As I looked around the room I reflected that each of these individuals has a full time job yet volunteers their valuable time to

the team. Furthermore, they believe in the potential of the HCP to the degree that they are willing to promote and advocate for it within their community. That is genuine leadership!

Speaking of leadership, management of local offices of two partner agencies changed in July. The Cumberland Development Team sends its warm thanks and best wishes to Lee Barclay who retired after 18 years as the Supervisor of the USFWS Ecological Services office in Cookeville and Bob Nichols former manager of TWRA Region 4 after a 35 year career with the agency. We wish a hearty welcome and look forward to continuing to work with Mary Jennings, the new supervisor of the Tennessee USFWS office, and John Gregory, the new manager of TWRA Region 4.

Alluvial Bars of the Obed Wild and Scenic River

Havens for Rare Plant Species

The rugged sandstone gorges of the Obed Wild and Scenic River provide important habitat for several rare, threatened and endangered plant species. This National Wild and Scenic River, managed by the National Park Service since 1976, flows in a west to east arc on the northern edge of the Catoosa Wildlife Management Area.

Nine of the 16 rare, threatened and endangered plant species growing in the Obed River system are found on "alluvial bars," small islands of rocks, boulders, sand and silt, which have been deposited by the river system. Sunny, glade-like clearings ("river scour prairies") characterize the highest, driest areas of the Obed's alluvial bars.

Because these areas are largely dry, except during periodic floods, the clearings support drought-resistant grasses, herbs and low shrubs, including Cumberland rosemary (federally listed as threatened). Although most of the rare plants on alluvial bars in the Obed system occur in the bar-top clearings, thickets of flood-resistant shrubs, such as threatened Virginia spiraea, also thrive in the areas where the alluvial bars meet the water.

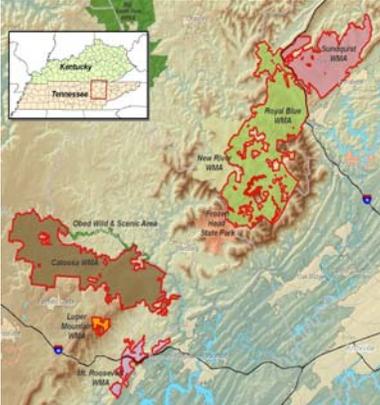
The rare plant communities of the alluvial bars depend on natural cycles of flood and drought. Changing the balance of flood and drought in the Obed system could make these plant communities vulnerable to shading by encroaching trees and shrubs that are ordinarily scoured away by periodic

floods. Urban development in the region poses another threat. Stormwater runoff contains increased pesticides, herbicides and other chemicals that could adversely affect the water quality and the plants on the alluvial bars.

These rare and beautiful Cumberland habitats, which have lasted for tens of thousands of years, now need our understanding and protection if they are to remain a vibrant part of the Cumberland Plateau.

Adapted from an article by W.J. Wolfe, USGS; K.C. Fitch, TDEC; and D.E. Ladd, USGS, which appeared in the Summer 2009 issue of Appalachian Highlands Science Journal

Northern Cumberlands Forest Resources HCP Update



Find map online: http://www.cumberlandhcp.org/forestryhcp_maps.html

The Core Team (staff from TTU, biologists and foresters from TWRA) completed revisions of the HCP Biological Goals and Objectives (BGOs) as well as proposed forest reserves based on Technical Team review. The Steering Committee also met to review the current BGOs.

Cerulean warbler management prescriptions were developed based on work by Dr. David Buehler, et al. The prescriptions were then reviewed by the Technical Team and Dr. Buehler.

Sean Blomquist, post doctoral

researcher at TTU, worked with a small SAC-subcommittee to develop and submit an Adaptive Management proposal that was selected by a team of scientists at USFWS for participation in an intensive week-long workshop in August. During the workshop, Core Team members as well as Geoff Call, the HCP's USFWS liaison, focused on developing an adaptive management plan for the NCFRHCP on forest management in response to hemlock woolly adelgid (*Adelges tsugae*) invasion on the Cumberland Plateau in Tennessee.

The workshop was a pilot program

hosted by the USFWS and the US Geological Survey to help projects like the HCP develop adaptive management strategies—a required component of the HCP.

It is an honor for this group to be chosen for the USFWS program! Results will be presented during the Annual SAC meeting on September 15 (see page 6 for meeting details).

Contact Dr. Hayden Mattingly at TTU, hmattingly@tntech.edu with any questions about HCP Science Advisory Committee information.

NCFR HCP Spotlight — Mark Thurman

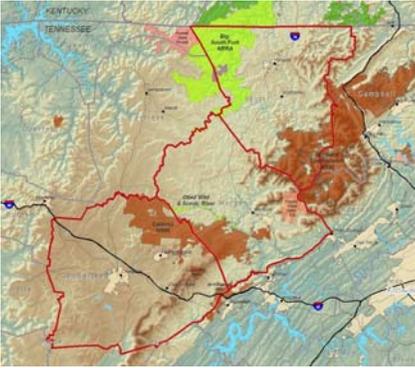
Mark Thurman, nongame wildlife biologist and conservation planner for the Tennessee Wildlife Resources Agency in Crossville, has been involved with the development of the Cumberland HCPs from early on. He serves on the Technical Teams for both the Forest Resources and Water Resources HCPs, the Forestry Core Team and is also involved in a number of the working groups on the HCPs.



Mark says he grew up “at the foot of the Plateau,” in Spring City. With a B.S. in fisheries management and an M.S. in biology from Tennessee Tech, he worked for 18 years in fisheries with TWRA before moving into nongame management with the agency in 2005. In his new role, he helped develop TWRA’s State Wildlife Action Plan and interactive habitat mapping program in partnership with The Nature Conservancy.

Mark says that working on the Forest Resources HCP “has been a good process for us at TWRA. It’s got forestry, game and nongame staff all working together on wildlife planning for the North Cumberland and Catoosa WMAs. It also represents a unique opportunity to get a long-term management plan for a whole suite of wildlife, both game and nongame species. Going forward, I hope the HCP will be a management template for other agencies and landowners, not just in Tennessee but across the Southeast.”

For more information on TWRA, visit www.tennessee.gov/twra.



Find map online:
http://www.cumberlandhcp.org/waterhcp_maps.html

Beginning in June, the Outreach Team for the Water Resources HCP has met 4 times to develop and implement a strategic plan to raise awareness about the project throughout the region.

In July 2009, the SAC formed a Core Team

Water Resources HCP Update

for the WRHCP. During the coming months the WRHCP Core Team will be responsible for completing draft biological goals and objectives, estimating the amount of take for covered species, and developing an adaptive management and monitoring strategy for the covered species. The Core Team will be staffed by SAC members, a new postdoctoral research associate and a new research assistant to be hired in September 2009 by Tennessee Technological University. The Steering Committee and Technical Team representatives will contribute to the Core Team planning and ultimately the draft HCP must be approved by the counties and cities developing the HCPs.

Currently, the HCP staff is working to develop Covered Activity Accounts that describe the activities that will be

covered by the HCP in detail, including processes, scope, future growth, potential impacts to covered species and conservation measures. Accounts will be used by the respective governments, the HCP Science Advisory Committee and other HCP Committees to help determine the precise activities to be covered and assist in technical planning tasks.

Cumberland HCP Project staff met with local staff of Tennessee's federal congressional representatives in July to update them on the progress of both HCPs. Staff included Jane Chedester (Senator Alexander), David Leverton (Senator Corker) and John Robbins (Representative Davis). Keeping these staff updated on our work will continue to build long-term support for the Cumberland HCP project..

Water Resources HCP Spotlight – Dennis Gregg

Dennis Gregg, executive director of the Obed Watershed Community Association (OWCA), serves on both the Steering Committee and the Technical Committee for the Water Resources HCP.

An ecologist with a masters degree from the University of Tennessee, Dennis has lived in Cumberland County for the past 31 years. As the paid executive director of OWCA, he organizes and informs a team of some 200 volunteer members. Under Dennis's leadership, OWCA has conducted stream assessments for about 60-70 miles of tributary streams in the Obed River system. In addition, OWCA has conducted stream restoration projects working with seven different property owners—the biggest being 350 feet of stream bank restoration on the Obed

River – and is actively developing additional projects.

Dennis believes that he was enlisted for the HCP project because of OWCA's detailed, on-the-ground knowledge about the Obed River system and is happy to be involved. "I'm quite enthusiastic about the HCP concept," he says. "And I have enjoyed the fact that the HCP is an open process. There's been some very productive give-and-take as we move forward."

For more information about OWCA, or about the Obed River system and its species, visit www.obedwatershed.org.



Science Advisory Committee News



The Science Advisory Committee staff at Tennessee Tech have been hard at work both on the Northern Cumberland Forest Resources (NCFR) HCP and the Water Resources (WR) HCP.

The NCFR Core Team, in conjunction with the Technical Team and Steering Committee, developed biological goals and objectives (BGOs) and conservation

measures, which required expert review. The BGOs and conservation measures were incorporated in to an electronic survey which was distributed to 50 Science Advisory Committee members. Thirty-five SAC members spent a total of 158 hours reviewing and filling out the survey. The survey data is being compiled and will be presented during the SAC Annual meeting, Sept. 15 at Cumberland Mountain State Park.

In a similar process to the NCFR HCP Core Team, the Water Resources HCP will also have a Core Team process. The Water Resources Core Team met preliminarily in July to begin bringing together participants from state and local government, and other key participants. Two new SAC staff will be joining other

Tennessee Tech staff beginning this fall and the Water Resources Core Team will begin to develop biological goals and objectives, and conservation measures.

The SAC is pleased to announce that Dr. Evan Hart, associate professor in the Department of Earth Sciences at Tennessee Tech, joined the Development Team. Dr. Hart's expertise is hydrology and he will contribute greatly to the Water Resources HCP process. Welcome, Dr. Hart!

The SAC assistant coordinator and a project graduate student worked in partnership with bat researchers to complete two acoustic survey routes. Tracking bats this way helps scientists understand which bats migrate through our project area. More to come on acoustic survey routes in a future newsletter.

Featured Species: Tracking Indiana Bats

The Indiana bat (*Myotis sodalis*), which has been federally listed as endangered since 1967, is a covered species for the Forest Resources HCP. This small insect-eater (its head and body measure 1.5 to 2 inches) ranges from as far north as Michigan, New York and Vermont to as far south as Alabama and Georgia.

In Tennessee, Indiana bats are known to hibernate in winter in caves in the Cumberland region. Just before and after hibernation, the bats can be found in forests surrounding these caves in Tennessee. Many of these bats seem to migrate to spend the summer in states as far north as Vermont. When not hibernating, these bats typically roost under the bark of trees.

But do Indiana bats that hibernate on the Plateau remain in summer and breed there? Scientists believe they do, but so far the evidence has been scant. If Indiana bats are indeed roosting and breeding on the Plateau, then in order to protect this endangered species, it is

important to learn more about their habitat needs and distribution in the Plateau region.

Part of the HCP process is to gather the latest scientific information on species to be covered by the HCP. For the Indiana bat, that has meant commissioning studies on the bat's range and roosting habits on the Cumberland Plateau.

One method of determining the range of bats is tracking with radio telemetry devices, which signal the bat's location. Because the bats must be tracked by plane and ground vehicles, it's an expensive, complicated process. To improve the researchers' chances of success, they first captured and banded numerous female bats, and then analyzed a hydrogen isotope in their fur to determine how far these Cumberland bats had ranged in summer.

Then this past spring those bats whose fur indicated they summered in Tennessee were identified by their bands and fitted with radio telemetry devices. When the bats emerged from hibernation, they were

tracked ranging far from their hibernation caves, headed into Kentucky. One bat, however, was later found in the Nashville area, suggesting that this female was staying in Tennessee for the summer. TWRA plans to continue tracking studies on Indiana bats in spring 2010 to learn more about their roosting and breeding habits on the Plateau. This cutting-edge research is expected to add enormously to knowledge about this endangered species and important insect-eater.



Indiana bat (*Myotis sodalis*)

MORE IMPORTANT INFORMATION ABOUT BATS...

White-nose Syndrome in the Cumberlands

A new disease that is having a devastating effect on cave bat populations in the Northeast is expected to reach Tennessee as early as this winter. It is known as “white-nose syndrome” (WNS) because affected bats often have a telltale white fungus on their muzzles. The fungus, a *Geomyces* species, is newly identified and thrives in the cold and humid conditions associated with caves and mines. Scientists do not yet know whether the fungus is the cause of the disease or simply a secondary infection.

First detected in upstate New York in 2006, WNS has already made its way to southeastern Virginia. Biologists and officials with the USFWS and TWRA believe that it’s only a matter of time before the disease afflicts Tennessee’s cave bats. Although the primary means of transmission is from bat to bat, it is also believed that humans can pass the

disease on from contaminated clothing and cave gear.

For this reason, on July 1, TWRA, TDEC and The Nature Conservancy announced that all state-owned Tennessee caves, sinkholes and abandoned mines would be closed to human visitation through May 2010.

In the Northeast, WNS has killed 90-100 percent of bat populations in infected caves. Because Tennessee’s cave bats are insectivores, their loss would have an enormous impact on people. As Richard Kirk, non-game and endangered species coordinator told The Tennessean newspaper in Nashville: “The loss of 500,000 bats means 2.4 million pounds of bugs aren’t eaten in a year.”

The Indiana bat, a federally listed endangered species that is vulnerable to WNS, is a covered species for the

Forest Resources HCP. Although human activities governed by the HCP do not affect WNS, the disease will be taken into account in the HCP as a “changed circumstance” for the Indiana bat.

Gray bats are another endangered bat species vulnerable to WNS. To obtain a baseline for gray bat populations in Tennessee prior to the arrival of WNS, researchers and wildlife officials have been monitoring populations during the summer maternity season with thermal imaging equipment. In addition, researchers have mounted ultrasonic detectors on their vehicles to do “acoustic surveying,” driving for 30 miles on roads that are common flight paths for several species of bat. The ultrasonic detectors pick up bat echolocation calls, which are then counted.

New HCP artwork represents people and animals for both HCPs!



In early 2009, the HCP Development Team began a partnership with an artist with ties to the Plateau. Delana Bettoli is the sister of a professor at TTU and her art will help define both HCPs to participants and the public.

Delana worked closely with Emily Woodlee, the HCP Outreach Coordinator, to understand the complexity of our project. She even visited the Plateau and took a hike with two Development Team members. These two drawings are what she developed for us. The far left represents the NCFRHCP and the near left represents the Water Resources HCP. We are pleased to present them here in draft form, and soon on t-shirts and totebags.

We are distributing the shirts and bags in appreciation to our partners for their time and dedication to the future of their communities and to the success of the HCP project. Expect to pick one up for yourself at an upcoming HCP event or meeting.

Special thanks to Delana Bettoli. Many thanks to all involved in this HCP process!!!

Upcoming HCP Meetings & Events

Meetings:

SAC annual meeting, September 15, 2009 at Cumberland Mountain State Park, contact Trish Johnson at

tjohnson@tntech.edu for more info.

Events:

American Fisheries Society annual meeting Aug 30–Sept 3, Nashville,

www.fisheries.org.

* Check our website for updates on coming events and meetings—
www.cumberlandhcp.org.

US Fish and Wildlife Service News

Thank you to Lee Barclay and his support for developing two HCPs in the Cumberlands. Best wishes in retirement, Lee! The HCP project will continue working with Mary Jennings, who is now the Supervisor of the Cookeville Field Office and Geoff Call who is the Service's primary representative to the

Cumberland HCP project.

The USFWS's FY10 HCP Planning assistance grant proposals were due August 19. The Cumberland HCP submitted a grant proposal to fund the HCP development during 2010.

Generally, grant awards are announced in mid-to late spring.

What is an HCP?

A Habitat Conservation Plan (HCP) is a means to protect natural resources and enable sustainable economic growth through a collaborative process of planning for growth.

The HCP process advances more sustainable development where water quality is protected and endangered and threatened species are conserved.

The Federal Endangered Species Act prohibits the harm (also called "take") of threatened and endangered species and their habitat. Any non-Federal entity (including city and county governments and state agencies) that is conducting activities that might harm (or "take") endangered and threatened wildlife on their land should obtain an incidental take permit from the U.S. Fish and Wildlife Service to provide protection against violating the Endangered Species Act.

To obtain a permit, the applicant develops a Habitat Conservation Plan designed to offset any harmful effects the proposed activity (like building a subdivision or installing a utility pipe) might have on the species. With an approved HCP, an Incidental Take Permit is issued by the U.S. Fish & Wildlife Service that allows resources to be used and take to occur as long as harm to the species is avoided, minimized and mitigated through the HCP.

To learn more about HCPs go to: <http://www.fws.gov/endangered/hcp/index.html>

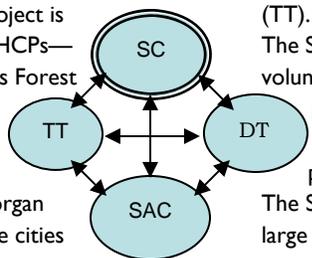
MESSAGE FROM EMILY WOODLE

The HCP project has been at the center of my professional life for the past 3-1/2 years and as I move on to another opportunity, I wanted to share my gratitude for everyone involved with this process. I am grateful to have been

involved with such an innovative process and dedicated people at all levels. Thank you to everyone I have worked with! Farewell to all and best wishes!
--Emily Woodle, outreach coordinator
Cumberland HCP 2006-2009.

HCP project organization

The Cumberland HCP project is developing two separate HCPs—the Northern Cumberlands Forest Resources HCP on TWRA lands and the Water Resources HCP covering Cumberland, Morgan and Scott counties and the cities of Crossville and Wartburg. Each HCP has a steering committee (SC) and technical team



HCP project communication flow.

(TT). The SCs and TTs are made up of volunteer participants from within the project area, as well as people who are interested in the success of the project.

The Science Advisory Committee is a large group of experts who are working to develop the science for both HCPs. They meet annually at Cumberland Mountain State Park.

Let us hear from you!

For more information about the Cumberland HCP Project contact:

awyss@tnc.org

Communications and Outreach Coordinator

Phone: 865-974-1955

E-mail: daveo@utk.edu

The Cumberland HCP Project is

a coalition of state and local governments,

organizations, landowners, and other private

citizens who are working together to address issues

of growth and conservation of the forests and

waters of the Cumberlands of Tennessee.



Check us out on the web: www.cumberlandhcp.org