

Welcome to the January 2012 Central Hardwoods issue of *The Monitor*, newsletter of the **Gulf Coastal Plains & Ozarks LCC**

The GCPO Monitor

Newsletter of the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative



The Wide-Angle View

A Message from the GCPO LCC Coordinator, Greg Wathen

Welcome to 2012! Dawn of a New Year is Time to Set Goals

Welcome to 2012! January is always a good time to take stock, consider how we did in 2011, and to establish some goals for the New Year. I'm not that much into New Year's Resolutions, but I am very much into goal setting, and establishing some clear

objectives for oneself, both personally and professionally.

So, I'll offer one LCC Coordinator's thoughts on some 2012 Goals for the GCPO LCC. First, and foremost, I would like to see the "Cooperative" part of Landscape Conservation Cooperative be the mantra for our LCC this year. 2011 was a year to establish a strong foundation for the LCC, fill some critical capacity needs, and to set our direction. We accomplished most of those priorities, so now it's time to re-focus and re-double our efforts on outreach to other partnerships operating in the GCPO geography.

Some of the groups with which I'm interested in strengthening relationships include the ones we've worked with in the past, such as the joint ventures, SARP, Black Bear Conservation Coalition. But we also need to expand those relationships to include the Gulf of Mexico Alliance, Southeast Partners in Amphibian & Reptile Conservation, Southeast Bat Diversity Network, and potentially others. The opportunities for collaborative conservation are enormous.

It's one thing to say that we need to have a relationship with these partner organizations - what I'm interested in doing is building a truly collaborative partnership. One way of doing that could be through the SE Conservation Adaptation Strategy, which envisions a future conservation landscape that can sustain fish and wildlife. To truly develop that vision is going to require an investment of resources and intellectual capital, time, talent, and treasure, if you will, to pull off. But I'm convinced that we've got those resources available to us through all the partnerships in place within our geography.

Another big goal of mine is to assemble a team that can explore the connections between the GCPO geography and the Hypoxia Zone in the Gulf of Mexico. It's a big, scary issue that a lot of people have studied over the years, and we know an awful lot about what causes hypoxia, and the source and amount of the nutrients that are contributing to the problem. The question becomes "what should be the role of the GCPO LCC in addressing the hypoxic zone in the Gulf?" My own thinking leads me to believe that fish and wildlife conservation strategies, like reforestation in priority watersheds, ought to be part of the solution, so I would like to explore the connections between habitat restoration for fish and wildlife, and nutrient reductions in areas known to be prime contributors to Gulf hypoxia.

I also have a goal of really diving into the ecosystem services potential of habitat conservation. A number of folks and organizations are making some great strides in this arena, both in documenting ecosystem benefits and the economic values of those services, and in developing tools that enable landowners to easily determine the ecosystem services potential for their own lands. I would like to see the GCPO LCC jump into this arena with both feet, and help develop and distribute the tools that will enable

landowners (both public and private) to capitalize on the services that their lands provide.

Finally, on the communications front, we have put a lot of effort into the development of a Communications Strategy that will move the conservation ball forward. This newsletter and our web site, gcpolcc.org, are parts of that strategy. For 2012, I would like to see our web membership grow to more than 1,000 interacting members by the end of 2012, and for the GCPO LCC's Communications Strategy to be recognized as a standard for LCCs nationally.

2011 was a good year for the GCPO LCC. Here's to an even better 2012!

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<https://www.surveymonkey.com/s/ZZK7YFB>

BETTER BOUNDARIES FOR THE LCC?

see below

THE CENSUS

Numbers that describe the GCPO LCC (below)

NOTE - links to full articles in this newsletter are accessible only to GCPO LCC members. Access to the complete archived version of the newsletter is available on the Gulf Coastal Plains & Ozarks homepage [<http://gcpolcc.org/>]. Or, apply for GCPO LCC membership at <http://gcpolcc.org/main/authorization/signUp?> Membership includes

The Meander

Profiling one of us - the many people and organizations that make up the far-flung Gulf Coastal Plains and Ozarks LCC

The Central Hardwoods Joint Venture



The Central Hardwoods Joint Venture [<http://www.chjv.org/>] formed in 2000 and focuses its work on bird conservation in the Central Hardwoods Bird Conservation Region, or BCR [<http://www.nabci-us.org/bcr24.html>]. The BCR straddles the Mississippi River between Illinois and Missouri. The region to the west is also known as the Ozarks or Interior Highlands, and the region to the east, the Interior Low Plateaus, although a small area of southern Illinois actually is affiliated ecologically with the Ozarks.

The BCR occupies a transition zone between what were historically tallgrass prairie, oak savanna and woodlands to its north and west; pine woodlands to the south; and oak and mixed mesophytic forests to the east. Components of each of those ecosystems are interspersed throughout the BCR, with their juxtapositions dependent to a large degree on variation in topography and soils as well as human uses of, and alterations to, the land. The BCR's priority bird species can be grouped into four suites based on general habitat affinities: grasslands; grass-shrublands; woodland-forests; and wetlands.

The CHJV Approach to Conservation

The CHJV's approach to bird conservation is centered on a sound scientific foundation that links its populations of conservation concern to habitat quality and quantity at landscape scales. For example, a partnership among the CHJV, the U.S.D.A. Forest Service's Northern Research Station, and the University of Missouri, Columbia has developed state-of-the-art population viability and habitat models to help prioritize conservation efforts. The models have identified specific ecological zones where conservation efforts should be targeted to increase the acreage of high-quality habitat for high-priority grass-shrubland and forest-breeding birds species, with the goal of reversing population declines through increased productivity. Another model allows planners and practitioners to determine where on the landscape potential exists for restoring native barrens, glades, woodlands and mesic forest. The results of both projects combined are helping the CHJV to target the most efficient and effective habitat improvements.

Another partnership with research scientists at the University of Tennessee is evaluating relationships among land use practices and grassland bird population sizes, which will assist the CHJV in setting population and habitat objectives for declining species of grassland-breeding birds across the BCR. While there are fewer priority species associated with wetland systems in the Central Hardwoods region than in many other Joint Venture regions, conservation planning for wetland-affiliated species is also underway.

Despite the CHJV's dedication to science as a foundation for conservation, increasing the acreage of high-quality bird habitat ultimately is the true mission of the Joint Venture, as it is with all habitat JVs across the country. The CHJV's focus on restoration of native ecosystems as a means to that end, especially those degraded by many decades of fire suppression, also dovetails nicely with the mission of the Gulf Coastal Plain and Ozarks Landscape Conservation Cooperative, as multiple species of conservation concern have suffered along with birds from the loss of ecosystem diversity. There are certain to be many opportunities for continued coordination between the CHJV and the GCPO LCC. Our many shared partners will look to both entities to help identify areas of overlap among birds and other, less well-studied taxa, to make conservation efforts ever more successful in the coming years.

Background on Joint Ventures

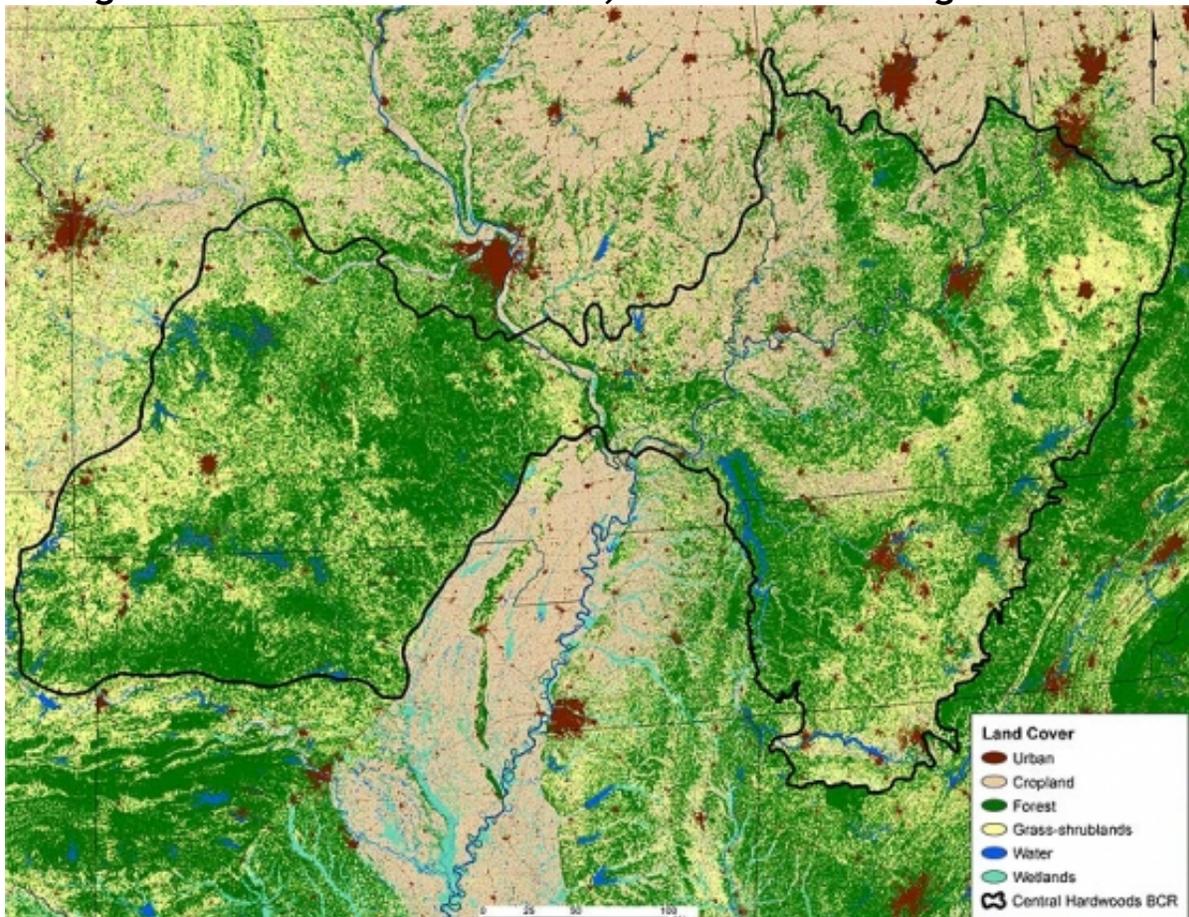
In the North American world of wildlife conservation, Joint Ventures (JVs) are known primarily as public-private partnerships for bird conservation. JVs first formed 25 years ago as a formal but voluntary mechanism for bringing state and federal agencies, non-governmental conservation groups, and others together to implement the conservation objectives of the North American Waterfowl Management Plan, and have since expanded in scope to focus on objectives set forth by newer national and international bird conservation plans such as Partners in Flight, the U.S. Shorebird Conservation Plan,

Waterbirds for the Americas, and the National Bobwhite Conservation Initiative. Each JV is staffed with a Coordinator that oversees the general operations of the partnership, and often has a Science Coordinator and a habitat Delivery Coordinator as well. A Management Board consisting of upper level administrators associated with partner agencies and organizations provides the “big picture” vision and provides financial and operational guidance to the enterprise as a whole. Partners and staff also work together to develop habitat projects of benefit to bird species of conservation concern in each respective region.

The Tidal Exchange

News from partners and partnerships within the Gulf Coastal Plains & Ozarks region

Change in the Central Hardwoods, and How to Manage It



One of the most dynamic partnerships within the Gulf Coastal Plains & Ozarks is the

Central Hardwood Joint Venture, or CHJV [<http://www.chjv.org/>]. The CHJV has been working strategically with diverse partners to develop no less than four major projects with landscape management implications. Located at the northern edge of the LCC, the Central Hardwoods includes 75 million acres of rolling hills covered with hardwood forests interspersed with glades, woodlands and deep river valleys. The Ozark Highlands and Boston Mountains lie within the GCPO, while the Interior Lowland Plateaus lie within the Appalachian LCC boundaries.

Assessing the Impact of Climate Change on Central Hardwoods

The CHJV is working closely with Frank Thompson of the US Forest Service Northern Research Station, Hong He of the University of Missouri, and a diverse group of partners including nonprofits, national forests and the GCPO LCC to assess the impact of climate change on forests. The goal is to develop a set of tools that will allow people to visualize not only broadscale climate change effects, but effects at the tree stand level to support “climate smart” conservation and forest management.

This project grew out of one at the Northern Institute of Applied Climate Science in the USFS northern region. Called the “Central Hardwoods Climate Change Response Framework,” it will develop models that show how climate change can impact forest species composition, landscape pattern, and wildlife habitat.

The project will use LANDIS II [<http://www.landis-ii.org/>], a forest process model that simulates forest succession, disturbance (including fire, wind, harvesting, and insects), climate change, and seed dispersal. It tracks the spatial distribution of discrete tree and shrub species and also allows for the incorporation of various ecosystem processes and states, such as biomass accrual and soil decomposition.

Looking for a Few Good Species Habitat Models

Todd Jones-Farrand, CHJV Coordinator, says that because this LANDIS model will be based on satellite imagery at high resolution, “applying it across 74 million acres is pushing the limits of what our computers can do.” Currently, Thompson & He have a LANDIS model that incorporates only Missouri data. However, extending the model to cover the entire JV will require lots more computing power, data, & people. “In addition to the Forest Inventory & Analysis and elevation datasets from the Forest Service, we will need basic model inputs for the entire region, including species habitat models. We have a number of bird models we can use, but any species that responds to forest structure could have a habitat model developed to gain insight into what the impacts of future climate could be.”

Thompson has created LANDIS models to assess national forest management options on the Hoosier National Forest and Mark Twain National Forest, so he has experience

overlaying LANDIS predictions with habitat models for various wildlife species, such as black bear, squirrels, a wide variety of birds, and a bat. Those models can apply at scales larger than the national forests, but the trick is predicting how forests on private lands will respond because there is generally less information while at the same time, they are easier to harvest.

“Research on this project will begin this spring of 2012, and we’ll be hiring post docs to do a lot of work over a three- to five-year time horizon,” says Jones-Farrand. “It will give us an idea of how certain management regimes and expected changes in climate under different scenarios will affect forest conservation one to two hundred years into the future.”

Todd Jones-Farrand invites anyone with a potential interest in contributing to this landscape analysis, for example by developing species habitat models, to contact him. [David_Jones-Farrand@fws.gov or 573-875-5341 ext. 226]

That’s Not All: Three More Landscape Management Projects

The CHJV is also collaborating on the following landscape scale projects.

- First, an ecoregional population viability model will assess the effects of different conservation strategies on density, abundance, and reproductive rate of three songbird species.
 - Second, an assessment of central hardwoods fire management across a representative gradient of habitats - from savannah grasslands to closed canopy forest - will determine the effects of various burn regimes on bird species abundance, density and nest success. This information is likely to be applicable to other oak hardwood systems in other regions of the country as well.
 - Finally, the CHJV is expanding on the Lower Mississippi Valley JV recommendations for how to achieve “desired forest conditions,” or DFC, in bottomland hardwoods [LINK] to benefit wildlife. Within the Central Hardwoods and West Gulf Coastal Plain, the focus will be instead on desired forest conditions for open shortleaf pine systems. “We have some general ideas of what these forest communities should look like. For example, a lot of them should be less densely stocked with more gaps - closer to 50% canopy cover, but we’ll need more detailed descriptions of forest structure such as basal area and tree size class” says Jones-Farrand.
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One Minute for the Monkey

A very brief Survey Monkey poll, to help us be scientific about communication!

How is the GCPO doing?

Click here to answer this less-than-one-minute survey:

What do you think of the proposed compromise (See "Better Boundaries" below) between the GCPO and Appalachian LCCs?

<https://www.surveymonkey.com/s/ZZK7YFB>

Better Boundaries for the LCC?

When LCC boundaries were established in 2009, the Central Hardwoods Joint Venture's region of responsibility (the Central Hardwoods BCR) was split between two LCCs. The western half of the CHJV containing most of the Interior Highlands (i.e. the Boston and Ozark Mountains) were included in the GCPO while the eastern portion of the CHBCR, known as the Interior Low Plateaus, were included in the Appalachian LCC. This split presented unique challenges to some of the existing partnerships in this region. The CHJV wanted to "remain whole" by expanding the GCPO LCC's northeastern boundary, while the Freshwater Mollusk Conservation Society preferred the original boundaries because they kept the Tennessee and Cumberland River drainages - the nation's most diverse freshwater ecoregions - intact.

Over the course of the past year and a half, a number of compromises have been proposed for the Interior Low Plateaus. The compromise proposed by the GCPO LCC Interim Steering Committee is to leave the LCC boundaries unchanged; however, within the Interior Low Plateaus, GCPO LCC staff and partnerships assume lead responsibility in planning for terrestrial conservation while the Appalachian LCC and partnerships retain lead responsibility for aquatic conservation planning. The Appalachian LCC Steering Committee has had preliminary discussions on this proposal but has delayed any decision until they can identify specific mechanisms for coordination and integration.

The Census

A little box of statistics about the GCPO LCC

The northern reaches of the GCPO LCC geography:

- Central Hardwoods Joint Ventured established in 2000.
 - 11 partner organizations, including the states of Tennessee, Oklahoma, Missouri, Kentucky, and Arkansas
 - 4 suites of priority bird species based on habitat affinities: forest-woodland, grass-shrublands, grasslands and wetlands.
 - 27 of 55 priority birds for the region are of continental concern
 - Number of counties in the region that experienced a population increase of at least 25% from 1990 to 2000: 291 of 318
 - Number of counties in the region that experienced a population decline from 1990 to 2000: 25 of 318
 - Highest priority: preserving ecological integrity of unfragmented landscapes
 - Number of Decision Support Tools developed: two - Forest Bird HSI Models and Ecological Potential Model
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