



The Walthour-Moss Foundation
 Post Office Box 978
 Southern Pines, NC 28388

Foundation News

A PUBLICATION OF THE WALTHOUR-MOSS FOUNDATION



VOLUME FIVE THE MISSION OF THE WALTHOUR-MOSS FOUNDATION "TO PRESERVE OPEN LAND, TO PROTECT AND IMPROVE WILDLIFE HABITAT, AND TO OFFER A PLACE FOR EQUESTRIAN PURPOSES" JULY 2009

MANY HANDS MAKE LIGHT WORK

The Walthour-Moss Foundation Bushwhacker Club held two spring meetings and put the old adage "many hands make light work" to good use! Over fifty club members worked in the 90°+ heat to cut and pile branches, shrubs and trees at Doub's Field and remove an old wire fence along the new Mile-Away Farm easement. Thank you to the following Bushwhacker Club members for their hard work, energy and enthusiasm!

- | | | |
|-------------------------|---------------------------------|--------------------------|
| Cheryl & David Altfeder | Jae Hawksworth | Jody Murtagh |
| Ron Baldwin | Cody & Kerrie Hayes | Marilee Nagy |
| Angela Baldwin | Blaine Holland | Kathy & Roger Nekton |
| Larry Best | Hossien Kamalbake | John Pavan |
| Janie Boland | Deborah & Ashley Kidd | Landon Russell |
| Sarah Brown | Erin & Caroline Kirkland | Savannah Russell |
| Marcia & Don Bryant | Susan, Laura & Nicole Lindamood | Cameron & Lincoln Sadler |
| Dan & Carol Butler | Corine Longanbach | Lee Sadler |
| Tayloe & Summer Compton | Mike McArthur | Larry & Linda Spence |
| Halie Cunningham | Fred McCashin | Susan Stallings |
| David Dillard | Kaitlyn McVeigh | Vee Sutherland |
| Effie Ellis | Babs Minery | Jan Van Fossen |
| Jim Granito | Dick Moore | Ginger Wright |
| | | Mel Wyatt |

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The Foundation News is available on-line by email.
 To be added to the email list log on at info@walthour-moss.org.

From:

*The Walthour-Moss Foundation
 Board of Directors*

President Emerita
 Virginia Walthour Moss ☼

Directors Emeriti

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|---------------|--------------------|
| Larry Best | Dominick Pagnotta |
| Dan Butler | Rosa Ronalter |
| Wilbur Carter | Michael Russell |
| David Dillard | Neil Schwartzberg |
| Effie Ellis | L. P. Tate, Jr. |
| Stephen Later | Virginia Thomasson |
| Richard Moore | Richard Webb |
| Mark Packard | |

- Tayloe Compton
 Martin O'Rourke
 Thomas Ross ☼
 Rick Smith
 L.P. Tate
 Edward Taws, Jr.
 James Van Camp
 Henry Wheeler ☼

☼ Deceased



Photo by Landon Russell

THREE CHEERS FOR THE BUSHWHACKER CLUB!: ON MAY 9TH, VOLUNTEERS SWEATED THE MORNING AWAY REMOVING A FENCE LINE AND CLEARING A FIELD. AFTERWARDS, THE GROUP GATHERED FOR A PHOTO AND LUNCH.

ACCESS GRANTED

The community response to the Foundation’s equestrian access program has been tremendous. We are pleased to announce four additional equestrian accesses, bringing the current total to fifteen!

Baldwin Access: Leslie Baldwin provided an access in the North Country. As part of a series, it connects Hunting Horn Lane in Hunt Country Properties to the Foundation.

Burgess Access: John and Lin Burgess provided an access that connects the Lake Bay area to the main Foundation.

Charles Access: Brad and Maryann Charles provided an access along Firelane Two that connects Sheldon Rd and Mile Away Lane to the Foundation

Spence Access: Doug and Lynna Spence provided an access in the North Country just off of Causey Road. It connects to the Baldwin access to connect Hunting Horn Lane as well as Causey Road to the Foundation.



Photo by Landon Russell

THE CHARLES ACCESS GIFT CONNECTS MILE AWAY LANE TO FIRELANE 2 ON THE FOUNDATION

DO YOU HEAR WHAT I HEAR?

LONDON RUSSELL

In early June, I joined Steve Hall from the North Carolina Natural Heritage Program on a trip into the Foundation for a sample bug collection. The Foundation had been picked as a site for a biological survey by the NC Fish and Wildlife Service. During our visit, Steve kept a recorder handy to make notes of the species he heard calling in the woods—everything from crickets to birds and even frogs.

While I have spent time in the Foundation, I have never truly stopped to listen to the birds, insects and other living things. The chatter of the birds was constant, and while I listened to the birdsong, Steve rattled off the name of each bird he heard into his recorder. It was fascinating and to me opened a whole new door of exploration and appreciation of these open lands.

In this issue of the Foundation News we are fortunate to have submissions from several new perspectives: Steve Hall on the results of his visit; Helen Kalevas, a newcomer to the Sandhills who just so happens to be an ornithologist/riparian ecologist; and Dominick Pagnotta, a naturalist by hobby who has taken a personal interest in the rare pitcher plant. These articles, with a focus on ecology, show another side to the beautiful landscape that makes up our Foundation.

Next time you are out in the Foundation, stop and listen to the noises that surround you. What you hear just might surprise you.

SEARCH FOR RARE ANIMALS ASSOCIATED WITH WETLAND HABITATS IN THE SANDHILLS

STEVE HALL, INVERTEBRATE ZOOLOGIST
THE NORTH CAROLINA NATURAL HERITAGE PROGRAM

The most familiar natural habitats of the Sandhills region are the dry woodlands dominated by longleaf pine, wiregrass, oaks, and blueberries. The hallmark animal species of this region – the red-cockaded woodpecker – is also a member of this community. Whereas much conservation attention has been devoted to managing longleaf habitats and the woodpecker in particular, there are actually far rarer communities and species in the Sandhills, and ones that are even more distinctive of this region. These are associated with the seepage wetlands that occur where rainwater, percolating down through the characteristic sandy soils of the area, meets imbedded layers of clay and is diverted back out onto the surface. These little pockets of saturated soils support rich communities of herbaceous plants, including many that are only known to occur in the North Carolina Sandhills. There are also many distinctive animals of these communities, including the pine barrens treefrog – rightfully described as the most beautiful frog in the Southeast – and the Saint Francis’s satyr, a butterfly that appears to be completely confined to Fort Bragg.

For more than 20 years, the North Carolina Natural Heritage Program has conducted biological surveys in the Sandhills to document the presence and status of its rare species and natural communities. One of our most striking findings is that seepage bogs and mires, along with their host of associated species, are rapidly disappearing, in sharp contrast to the longleaf

woodland communities and their species, which have at least stabilized, if not increased, due to active management using prescribed burns. The best examples of these seepage communities are almost entirely restricted to Fort Bragg and even within the base, they continue to decline. Along with the satyr, the base’s populations of Venus flytraps and cranberries – the only ones remaining in the Sandhills – are becoming more and more restricted to increasingly tiny habitat remnants.

The main cause of their disappearance, as true for other Sandhills habitats, is loss of fire. Sandhill seeps, in particular, require almost as frequent burning as longleaf habitats, but their greater wetness makes them more difficult to ignite and they are often burned only around the edges in most prescribed fires unless a deliberate effort is made to burn them under just the right conditions. Sedimentation also appears to change the composition of these communities as does changes in the natural hydrology of the area.



Photo by Steve Hall

THE PINE BARRENS TREE FROG: FROGS SUCH AS THIS ONE CAN BE HEARD ON THE FOUNDATION BY THE RICE POND



Photo by Landon Russell

BUG COLLECTOR: STEPHEN HALL OF THE NORTH CAROLINA HERITAGE SOCIETY INSPECTS THE COLLECTION OF INSECTS CAUGHT ON THE FOUNDATION

The elimination of beaver-created wetlands over most of North America prior to 1900 also contributed to the rarity of these communities – beaver activity is particularly important in creating and maintaining the seepage mire communities occupied by the Saint Francis’s satyr. Paradoxically, the return of beaver to the landscape also poses problems, particularly where they inundate some of the few remaining fragments of habitat that still remain within the region.

Most of the surveys we have conducted in the Sandhills have focused on documenting rare plant species and vegetative communities. This spring, we are conducting a short survey focused on animal species and we are giving

special priority to the species associated with seepage wetlands. This is what brought me to the old “rice field” located at the center of The Walthour-Moss Foundation lands. Old man-made impoundments, such as this appears to be, often support species that were originally associated with beaver ponds. The proximity of the Foundation to Fort Bragg and the fact that both areas belong to the same stream drainage also suggested that there was a good possibility of finding some of the rare animals associated with seepage mires.

Unfortunately, in the three visits I made to this site, I was able to document only a couple of the target species. One of them was the pine barrens treefrog, which had a large breeding chorus in the upper, sedgy end of the impoundment. Although they take a great deal more luck to spot during the day than red-cockaded woodpeckers, they are well worth looking for and add another special element to the natural habitats protected at the Foundation. With more surveys, still other species can be expected to turn up, but for the present, our finding here continues to support the pattern of decline that we are finding across the region for seepage wetlands and their species. Hopefully, this survey will help bring this decline to greater attention and that further investigations can provide the type of management solutions that have successfully stabilized the longleaf communities of this region.

For more information on the North Carolina Natural Heritage Program, please log onto www.ncnhp.org.



A NEWCOMER’S VIEW OF THE WALTHOUR-MOSS FOUNDATION

HELEN KALEVAS

The Walthour-Moss Foundation (WMF) is one of the key reasons I chose to move back to the east coast after a twenty-nine year stint as an ornithologist/riparian ecologist in Arizona. The other reasons were close proximity to family (primary reason), and an amazing fox hunt, staff, and hounds. After hunting in the Wild West where there are huge tracts of public lands to hunt on, the thought of coming back east was claustrophobic. But knowing there are 4,000 acres available to ride on clinched the deal. The Foundation is a precious gem amidst development, highways, and shopping centers. Access to a preserve of this enormity and its’ importance to wildlife was well worth the decision to move to Southern Pines with my horse above all other areas with similar attributes.

With that said, the WMF is a precious open space and greenway, a true sanctuary of nature. The presence of open space and



Photo by Susan Ladd Miller

THE PINE SAVANNAH: SEVERAL WEEKS AFTER THE BURN THE WIREGRASS FLOURISHES

greenways for wildlife has been monitored throughout the entire United States. As natural areas all over the country are being converted to urban or suburban development, landscape and urban planners are pressed to integrate wildlife habitat into a rapidly changing landscape. Urban greenways provide a broad range of social, economic and environmental benefits, and consequently are enjoying worldwide popularity as a developing form of urban open space protection. One of the goals of greenway development is often to provide habitat for wildlife. This is the case with WMF as well, a protected open space and greenway providing habitat for wildlife and a place for riders and others to appreciate and enjoy.

Charitably-owned forests (greenways/open space) are a valuable economic, social and environmental asset – in addition to keeping forestland intact, local forest ownership gives residents greater control and self-determination in how their communities grow and develop, keeps economic benefits from the land in local hands, preserves and enhances local traditions, and allows the community to invest in long-term resource protection. Across the country, millions of acres of private forestland are changing hands. Much of this land is at risk of being developed for residential or commercial use, which can cause significant fragmentation of forests and wildlife habitat, close off local residents’ access to outdoor recreation opportunities, hunting, forestry and other traditional uses, and imperil economic development, employment and other community benefits. Increasingly, forward thinking communities are acquiring

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some of these lands to protect forests from possible conversion and to manage them as community forests. The WMF has achieved this amazing goal through the generosity of the area residents. Although the Foundation is presently raising funds to complete the payment for the last acquisition, it is a wonderful achievement.

In recent years, privately-owned forestland has been changing hands rapidly, particularly as large timber and forest products companies divest their land holdings. The result is often smaller parcels of forestland and increasing fragmentation of ownership. As ownership patterns shift, forests are increasingly being developed for commercial or residential uses. Since 1978, 20-25% of all privately-owned forest land has changed ownership; approximately 75% of industry-owned private forestland changed hands between 1996 and 2005. Another important victory for the Foundation is that as a 501(c)(3) public charity, ownership will not change hands and fall into the grasp of urban or commercial development.

In previous newsletters, there has been much attention paid to stewardship of the WMF, the importance of burning to maintain longleaf pine savannahs, etc. The WMF contains a plethora of habitat types which include longleaf pine savannahs and wire grass essential to the endangered red-cockaded woodpecker, areas of pine and oaks, wetlands, lakes, and of most interest to me personally are stream corridors or riparian areas. Folks here call these riparian systems drains (visualizing a pipe for runoff) or heads (term used for a bathroom), less dignified terms in my opinion.



Photo by Landon Russell

RIPARIAN HABITATS, SUCH AS THIS ONE LOCATED IN THE FOUNDATION, SUPPORT DIVERSE WILDLIFE AND VEGETATION

Riparian systems in the southwest where I conducted my graduate studies are crucial to wildlife and support a higher diversity and abundance of wildlife of all types.

High foliage density and diversity in vertical and horizontal dimensions were among the variables most frequently associated with high avian densities and diversities in riparian zones along the lower Colorado River. Cottonwood (large riparian obligate trees similar to yellow poplar) and willow attracted, or were correlated with vegetational factors that attract the greatest density and diversity of insectivorous birds and other animal species. Game birds such as doves and quail were associated with riparian shrubs in the western United States demonstrating riparian corridors are essential to all wildlife.

In the southeast, this is true as well. Presence of riparian vegetation substantially increases the wildlife value of created wetlands and riparian areas. For example, borrow pits (mining areas) surrounded by bottomland hardwoods along the lower Mississippi River

were generally associated with a greater frequency of both bird and mammal observations compared to adjacent habitats containing few hardwoods. Riparian ecosystems not only supply breeding and foraging habitats for resident birds, but also provide productive habitats for migrant birds. These areas are biodiversity at its best.

Riparian corridors are proven to enhance property market values. For example, one protected riparian area in Pennsylvania is credited with a 38% increase in the value of a nearby property. Buffers enhance human health through protecting and improving drinking water quality, saving money and resources on water treatment as well. They also add to our quality of life through aesthetic amenity and the peace of mind that a person has knowing of and experiencing the healthy stream and riparian ecosystem that a buffer provides. There may be no precise way to monetarily measure the value of quietly sitting under a tree or fishing in a creek, but these benefits are very real nonetheless. Riparian corridors provide shelter for insects (though we dislike those pesky deerflies in summer!)



Photo by Landon Russell

SWEETHEART LAKE IN THE NORTH COUNTRY: PART OF A RIPARIAN CORRIDOR

which are essential food sources for birds and other animals. These corridors contain all the required elements for increased wildlife abundance which enhances quality of life around them.

The study of mammalian populations in created or restored riparian ecosystems is generally lacking in the literature, and only occasionally referred to by noting occurrence of deer or small mammal sightings or use during routine surveys of other parameters. In discussing mammal occupation of riparian corridors with Jody Murtagh, Moore County Hounds huntsman, we concur that riparian areas are essential cover for all animals. Therefore, in my opinion, riparian areas should be carefully protected from destructive forces due to their importance and protection of wildlife.

In a perfect world where funding was available, it would be fascinating to monitor wildlife in four habitat types throughout the Foundation; longleaf pine savannahs, pine/oak mixed forest stands, lake/wetland habitat, and riparian corridors. In statistical methodology there would be no difference. But what would the outcome show if a study of that magnitude could be conducted on the Foundation? Analysis in other ecosystem studies have shown without a doubt that water associated habitats have the highest abundance and density of wildlife. I speculate that would be the case within the Foundation.

The WMF is all of the above, open space and greenway, and a community treasure with essential riparian ecosystems that maintain high plant and animal diversity.

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Newcomer's View**

The importance in preserving such a precious resource cannot be judged in monetary terms but in the true value of exactly what it is, a preserve. Studies show that areas such as the Foundation increase adjacent property values. People want to live in close proximity to open spaces and greenways paying premium prices to do so.

In light of ever increasing development of forests and open lands throughout the country, this area is a precious resource that will be preserved for perpetuity with the support of our community. The Foundation draws people because of what it is, a precious resource for all to see and experience. That was one of the major draws for this western girl to come back to the south, access to the Foundation.

References available upon request.



HELEN KALEVAS, ORNITHOLOGIST/RIPARIAN ECOLOGIST AND SANDHILLS NEWCOMER

Helen Kalevas has twenty-five years of experience in biological research and more recently, business management. Her specialty is avian ecology specifically linking avian diet, insects, and vegetation. In the recent past, she has been a consultant on topics ranging from southwest riparian studies, endangered Southwestern willow flycatcher issues, and dam effects on ecology along the Colorado River in Grand Canyon. During 2000-2005, Ms. Kalevas successfully owned and managed a profitable research coordination business. To promote preservation for birds and small farmers in the tropics, Ms. Kalevas sold gourmet, shade-grown, organic coffee. This line of work stemmed from her intermittent employment with the Smithsonian Institute where she studied birds and insects on coffee farms in Central America.



Photo by Landon Russell

YELLOW BELLY SLIDER: A RESIDENT OF A RIPARIAN HABITAT, LAYS EGGS ON OLD MAIL ROAD

SPECIAL PLACES IN THE FOUNDATION

DOMINICK PAGNOTTA

“Special places” in the Foundation remind me of my grandfather’s farm. I knew every patch of grass and moss, every rock in the walls and especially where to find asparagus in the spring. Hidden places I dared not disclose, as someone else might have my crop in the kitchen before I could get off the school bus.

Now, many years later, while riding or walking in The Walthour-Moss Foundation, my “special places” hide interesting and rare plant life. The Walthour-Moss Foundation is host to two carnivorous plants known as pitcher plants: trumpets, aka yellow pitcher plant (*Sarracenia flava*) and purple pitcher plant (*Sarracenia purpurea*).

Foraging, flying and crawling insects such as flies are attracted to the cavity formed by the cupped leaf of the pitcher plant, often by visual lures such as flowers, and bribes of nectar. The sides of the pitcher are slippery and grooved in



Photo by Dominick Pagnotta

THE YELLOW PITCHER PLANT IN BLOOM



Photo by Dominick Pagnotta

SARRACENIA FLAVA, ALSO KNOWN AS THE YELLOW PITCHER PLANT

such a way to ensure that the insects cannot climb out.

The small bodies of liquid contained within the pitcher plant trap and drown the insect, and it is gradually dissolved. This may occur by bacterial action (the bacteria being washed into the pitcher by rainfall) or by enzymes secreted by the plant itself. Whatever the mechanism of digestion, the prey are converted into a solution from which the plant obtains its mineral nutrition (particularly nitrogen and phosphorus).

Carnivorous plants such as pitcher plants perform most of their growing effort at the beginning of the year. After these initial pitchers are made, few additional ones are produced. It is essential that this stage of the growing cycle completes uninterrupted, as this

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is when the plant collects most of its nutrition. During the winter, pitcher plants produce tall sword-shaped leaves lacking pitchers. These leaves allow the plant to photosynthesize all winter when there are fewer insects.

Pitcher plants are most easily found in The Walthour-Moss Foundation during the months of May through June. North Carolina hosts many other pitcher plant varieties in bogs and wet savannahs (pocosins and sandhill seeps). See "The Foundation News" April 2009 Page 5 - Sandhill Seeps.

Additional information for cultivation and sources can be found at www.cobraplant.com.



Photo by Landon Russell

PRESCRIBED BURNING FACILITATES THE GROWTH OF WIREGRASS AND CONTROLS THE GROWTH OF SCRUB OAKS



Photo by Landon Russell

WIREGRASS GROWTH: FIVE WEEKS AFTER THE PRESCRIBED BURN, WIREGRASS FLOURISHES AND THE SCRUB OAKS HAVE TURNED BROWN



PRESCRIBED BURNING UPDATE

Prescribed burning is an integral part of the Foundation's land management and stewardship plan. "Scientific evidence and managerial experience strongly support regular prescribed fire as a tool for perpetuating longleaf pine and the many plants and animals that are dependent upon a healthy longleaf pine ecosystem," states Registered Forester and author of the Foundation's stewardship plan, Dr. Charles D. Webb.

On average, 700-900 acres of the Foundation's 4,000+ acres are scheduled to be burned each year. These warm season burns enhance wildlife habitat by perpetuating the longleaf pine-wiregrass savannah, control the growth of scrub oak which uses the scarce nutrients and reduces the sunlight needed for understory grasses and herbaceous plants and aid in preserving and restoring the longleaf pine ecosystem.

Burn areas on the Foundation are kept small, 30-70 acres, in comparison to Fort Bragg where controlled burns of 200+ acres are not uncommon. While the landscape of an area that has been burned is immediately changed by the burn, re-growth of vegetation, especially the wiregrass is almost immediate.

Depending on the weather, several more warm season burns will be conducted on the Foundation over the summer. Email notifications will continue to be sent on the day of each prescribed burn. Questions regarding the prescribed burning program should be directed to Landon Russell at 910-695-7811.



Photo by Landon Russell

COME ONE, COME ALL! FALL CLEAN UP DAYS SCHEDULED

The fall meetings of the Bushwhacker Club will be held the last two Sundays in September and the first Sunday in October. Volunteers are encouraged to sign up to come out for a half-day or two and help us clear the trails of any debris left by summer storms.

Bushwhackers should plan to bring gloves, hedge trimmers, shears, chainsaws, gators, lots of enthusiasm and a touch of good humor. Coffee and donuts will be provided in the morning and lunch in the afternoon.

If you would like to volunteer for a half-day on one, two or all three dates please contact Landon Russell by telephone at 910-695-7811 or email administrator@walthour-moss.org.

To those who plan to come out, we really appreciate your RSVP, as it will help us determine where to send groups and the number of lunches needed. Thank you for volunteering!

Mark Your Calendar! THE BUSHWHACKER CLUB Fall Work Days:



Sunday, September 20
Sunday, September 27
Sunday, October 4

2009 Fall Benefit Rides



Sunday, October 11
**3rd Annual Ride
for the Horse**
**To benefit the U.S.
Equine Rescue League
Moor Meadow**

Sunday, November 8
18th Annual Hunter Pace
**To benefit the
Moore County Hounds
Hobby Field**