

Tallasse Forest

Athens-Clarke County,
Georgia

Inventories, Baseline Data and Recommendations by Contributors

Compiled by Dr. Karen Porter
Odum School of Ecology, University of Georgia
for the Oconee Rivers Greenway Commission
November 12, 2014

Tallassee Forest
Athens-Clarke County, Georgia:

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Recommendations by Contributors**

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Professor Emerita

Odum School of Ecology
University of Georgia

for the Oconee Rivers Greenway Commission

November 12, 2014

Acknowledgements

I am deeply grateful for the time invested by everyone who provided the authoritative inventories, comments and recommendations included in this report. Their commitment of time and expertise attests to the unique qualities of Tallassee Forest and their desire to see it preserved. The Oconee River Land Trust supported the preparation of this report by providing the time of their volunteer interns. UGA undergraduate Connor Timpone converted inventories to Excel spread sheets. Heather Abernathy, master's student in Warnell School of Forestry, entered experts' comments, formatted the inventory tables and reviewed and commented on the report. Beth Gavrilles, Odum School of Ecology, designed the cover, edited drafts and produced the report.

The report was reviewed by the Natural Areas Committee of the Oconee Rivers Greenway Commission (Nat Kuykendall, Cartter Fontaine, Amy Rosemond, John Willis, Karen Porter) and was endorsed by ORGC on December 16, 2014.

Cover: Tallassee habitats and portrait of Tallassee Mico, King of the Creeks by John Trumbull 1790 (designed by Beth Gavrilles).

Table of Contents

Introduction	1
Report Summary	2
Table 1. Species Inventories at Tallassee Forest 2011-2014	3
Summary of Recommendations by Contributors.....	4
Figure 1. Tallassee Basemap	5
Figure 2. Tallassee Area Topographic Map	6
Figure 3. Tallassee Area 1938 USDA Aerial Photograph	7
Inventories, Baseline Data and Reports 2011 – 2014	8
Comments and Recommendations by Contributors.....	9
Birds	9
Richard Hall, Ph.D.....	9
Ed Maioriello Ph.D.	10
Butterflies and Skippers	10
James W. Porter, Ph.D.....	10
Plants	11
Linda Chafin, MS	11
Walt Cook, Ph.D.	12
Wetland and Aquatic Environments	12
Karen Porter, Ph.D.	12
Reptiles and Amphibians.....	14
Kevin Fouts, MS student	14
Hydrology.....	14
Ben Emanuel	14
Archaeology	15
David Hally, Ph.D.....	15
Planning and Management.....	16
Nat Kuykendall, MS.....	16
Geology	17
Daniel D. Williams, MS	17
Naturalist Comments	18
Roger Nielsen	18
Inventories	19
Figure 4. Geologic Map	27
Figure 5. A Considerable Tract of Country	28

Introduction

The purpose of this report is to provide information that can guide planning and management of Tallassee Forest (Tallassee Tract). The intended audience includes the Oconee Rivers Greenway Commission, Athens-Clarke County staff, the Oconee River Land Trust and other stakeholders. It documents the exceptional natural and cultural resources on the Tallassee Tract and includes inventories made by experts in their fields, i.e. Linda Chafin author of the *Field Guide to the Rare Plants of Georgia*. These establish baselines for assessing changes over time and comparing the tract to others in the county. The report also includes their recommendations and those of other experts with knowledge of the tract.

The Tallassee Forest is a 310-acre tract of land on the Middle Oconee River in northwest Athens--Clarke County, Georgia (Figure 1. Tallassee Tract Basemap). Size and location give it the potential to be developed as one of the anchors of the Oconee Rivers Greenway. The others are Sandy Creek Nature Center (225 acres) in the north and the State Botanical Garden (313 acres) in the south of the county. Large size, exceptional habitat quality and relatively little recent disturbance make it a significant environmental resource for the county and the region. The diversity of native plants, non-game wildlife and large unfragmented habitats warrant an ecological management plan that will preserve the tract as a significant natural area.

The tract includes the floodplain and approximately 6,150' of frontage on the Middle Oconee River (Figure 2. Tallassee Area Topographic Map). There is approximately 3,800' perennial streams, springs and part of a 3.8-acre beaver pond marsh. A significant area of the tract has been covered in old growth hardwood forest for more than 75 years (Figure 3. Tallassee Area 1938 USDA Aerial Photograph). Steep slopes confined agriculture and plantation pine to the flat areas on ridges and the floodplain. The property was managed primarily for hunting during the past 25 years. There are 7 of the Georgia Department of Natural Resources High Priority Habitats that are rapidly disappearing in the Southeast: mature oak-hickory-pine forest, mesic hardwood forest, wetlands including a beaver-maintained marsh, bottomland hardwood forest, canebrakes, springs and spring runs and small streams. Springs and streams with high water quality recharge the Middle Oconee River that provides drinking water to the county. The extensive upland American holly forest and a mature bottomland forest with canebrakes and minimal invasive privet are rare occurrences in the region. Pre-Columbian and historic archaeological sites were found on the property.

ACC acquired Tallassee Forest in November 2012 via the Greenspace Acquisition Program with funds from the 2005 SPLOST, Riverview Foundation, Conservation Fund and the previous owner. The property is permanently protected by a Conservation Easement (CE) held by the Oconee River Land Trust (ORLT). It is the purpose of the Conservation Easement to assure that the property will be retained forever predominantly in its relatively natural, forested, open space and relatively undeveloped condition, to maintain the significant conservation values on the property, including the various natural habitats, riparian buffers, and opportunities for public education and passive, natural resource-based recreation and to prevent any use of the property that will significantly impair or interfere with the conservation value of the property."

The Tallassee Forest includes the Middle Oconee River, its floodplains and a major tributary stream making it part of the Athens-Clarke County greenway system and including it in the Greenway Network Plan. The purpose of the greenway is to protect these areas for the benefit of Athens citizens. Allowing public access for light recreation, education and research while protecting the large unfragmented habitats, the diversity of native plants and non-game wildlife species, rare species and ecosystem services such as aquifer recharge and water quality maintenance is a

challenge. The Oconee Rivers Greenway Commission (ORGC) is charged with developing a plan for this river-oriented system and recommending rules and regulations for its proper protection and management.

Report Summary

In Spring of 2011, a 570-acre property that included what is now the 310-acre county-owned Tallassee Tract came on the market. To establish its conservation value experts in the taxonomy and ecology of plants and animals, forestry, geology and archaeology were asked to volunteer their time to inventory the tract. I also requested that they provide their comments and recommendations. Fourteen experts volunteered over 170 professional hours to provide the information compiled in this report. The result is an inventory that exceeds that available for other public properties in the county and region and attests to the quality and significance of the site. Expert comments are included in full in the *Comments and Recommendation by Contributors*. Their major points are summarized in the *Summary of Recommendations by Contributors*. Many of the inventories were used as baselines for the Oconee River Land Trust Conservation Easement on the Tallassee Tract. A guide to Tallassee geology is now available. Student projects and class laboratory reports were produced. The tract has been visited by the Oconee River Audubon Society and the Georgia Botanical Society. A study of Giant Cane genetics has begun, the tract is visited by UGA classes and the inventories are ongoing.

The tract has a high species diversity and some species are rare or in decline. Over 137 species of plants including 11 wetland species have been recorded to date. The bottomland forest has stands of Giant Cane that has all but disappeared from the Southeast. There are 58 species of butterflies. These include four rare species, the Great Purple Hairstreak, Henry's Elfin, the Green Hairstreak and Gemmed Satyr all of which are found in the bottomland and wetland. There are 13 species of skippers, often included with the butterflies. The Cane Brake Skipper is dependent on Giant Cane as a food source. So far, 63 species of birds have been recorded. The bottomland forest is a habitat that supports the Rusty Blackbird and Swainson's Warbler, which are in decline. There are 13 families of aquatic invertebrates and 22 species of amphibians and reptiles. One expert referred to Tallassee as a hotspot for biodiversity in the county.

The primary value of the tract is that it has large, unfragmented habitats. These support large, diverse populations of native plants and non-game wildlife. Large population size can impart resilience to disturbances such as drought and make the tract a refuge. They also perform ecosystem services e.g. water quality maintenance and aquifer recharge. Open areas and land disturbed by development are common in the county. Large tracts of relatively undisturbed, old-growth forest are not. Experts state that there is no other American holly forest in Georgia of the size found on Tallassee. The bottomland forest, canebrakes and wetland are sensitive areas. They are unusual in that they are mature and have relatively little privet. Giant Cane occurs in the bottomland. It is uncommon in the region because of clearing and the invasion of floodplains by privet. Four locally rare butterflies and the Cane Brake Skipper, which is dependent on Giant Cane as its sole food source, are found in the bottomland and adjacent wetland. The bottomland forest is also habitat for the threatened Rusty Blackbird and Swainson's Warbler. Free-flowing springs and streams are of hydrological significance in that they recharge the Middle Oconee River. The presence of 7 High Priority Habitats, high species diversity, sensitive areas such as the bottomland forest, springs, streams and wetland, and uncommon or threatened species warrant that the tract be managed as a preservation area to be used primarily for teaching and research.

**Table 1. Species Inventories at Tallassee Forest, Athens-Clarke County, GA
2011-2014**

Inventories of native and non-native plants and non-game wildlife were made either throughout the year (butterflies and skippers, trees, shrubs and vines) or seasonally, primarily in the spring (birds, reptiles and amphibians, aquatic invertebrates, wetland plants, wildflowers, herbaceous plants and cool-weather grasses). Some were from one or two visits, others were more frequent. Some inventories were made in one year and season (amphibians and reptiles), other over two or more years (plants, birds and butterflies) and some are ongoing. Species lists are expected to increase with more frequent sampling, especially during periods of rapid change, i.e. spring and fall bird migration and spring wildflower season.

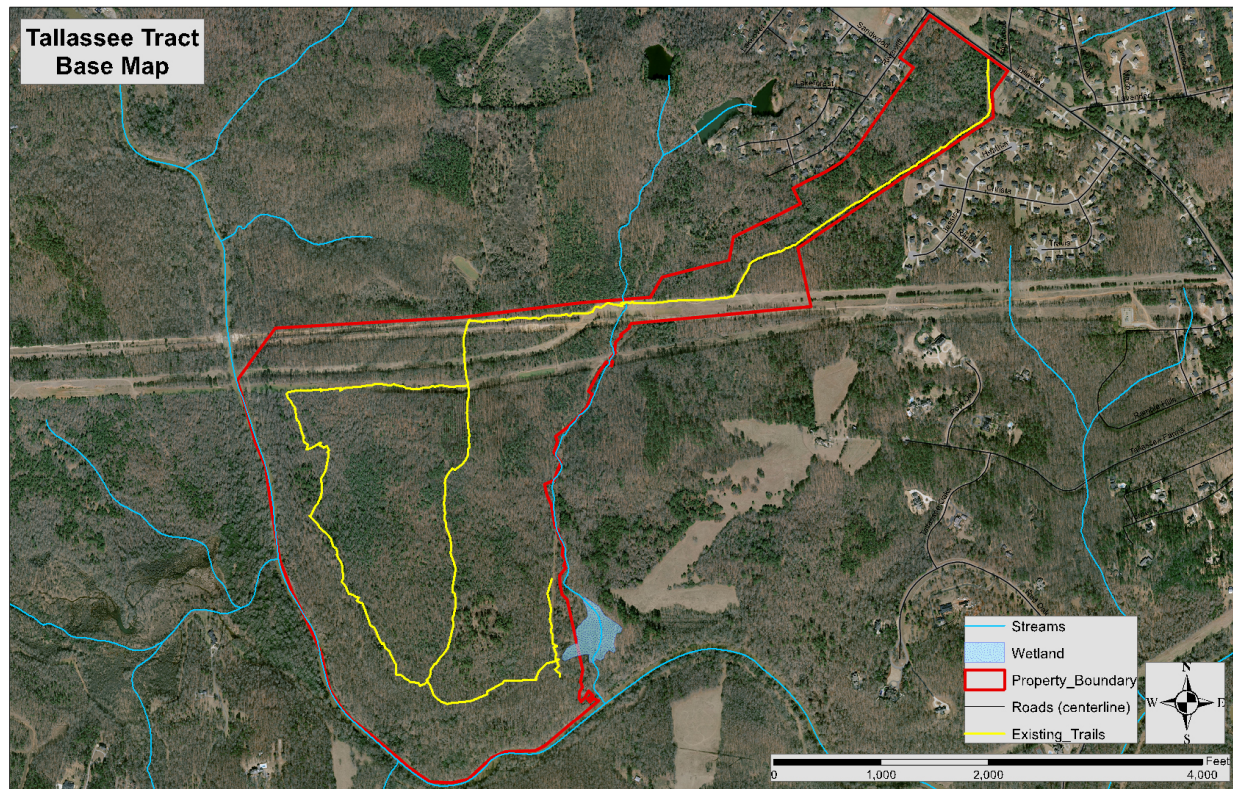
Group	Number of Species
Birds	65
Butterflies	58
Skippers	13
Spring Wildflowers and Plants Total	137
Trees, Vines, Shrubs Subtotal	43
Wetland Plants Subtotal	11
Reptiles and Amphibians	22
Aquatic Invertebrates (Families)	13

Summary of Recommendations by Contributors

Experts made diverse recommendations which appear in the *Comments and Recommendations by Contributors*. The following is a summary of their major points:

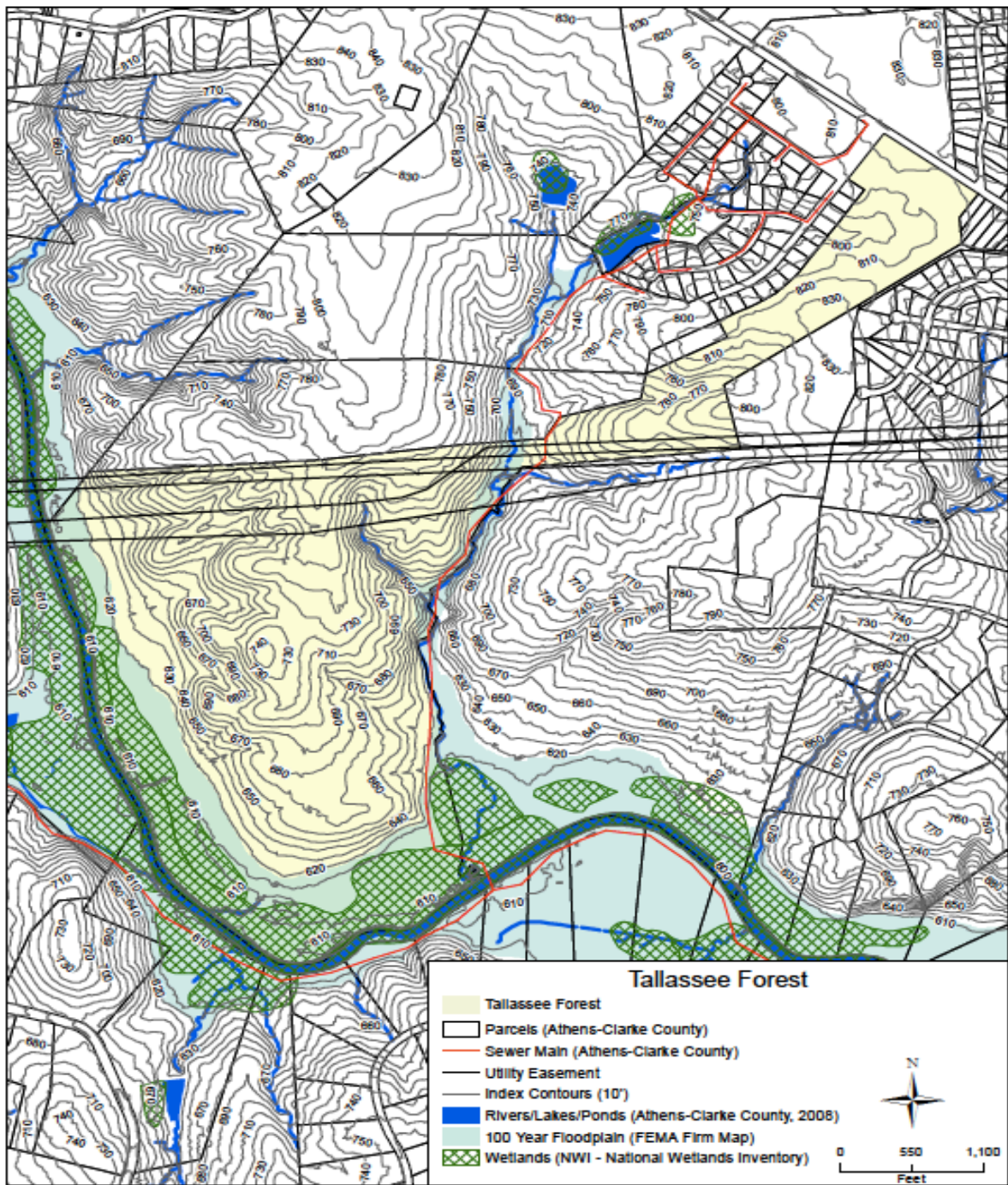
- Manage Tallassee as a natural area; emphasizing conservation and protection. Conserving native plants, non-game wildlife, and the habitats that support them should be the goal of the ecological management plan.
- Have a clear statement of purpose that defines the ultimate intent and value of management and reflects the conservation easement, a legally binding document.
- Map habitats and species populations to delineate sensitive areas, Significant Natural Areas, and protection zones before designing trails or other amenities.
- Protect the American holly forest. One this large is extremely rare.
- Avoid disturbances such as road construction and visitor impact in sensitive areas: bottomland forest, levee, wetland, steep slopes, springs and streams.
- Protect the bottomland forest and canebrakes. This area is habitat for threatened Rusty Blackbird, Swainson's Warbler, four species butterfly that are rare for the area and a skipper that is dependent on Giant Cane as a food source.
- Keep large, mature habitats such as hardwood and bottomland forests intact; habitat loss and fragmentation threatens species viability and resiliency throughout the region.
- Acknowledge that the high diversity of plants and animals and intact habitats are of public value. Tallassee Forest is a green oasis surrounded by rapid development.
- Protect the hydrological function of the property. Springs, streams and groundwater recharge the Middle Oconee River that supplies our drink water.
- Allow natural processes, such as nutrient cycling and succession, to occur.
- Apply standards appropriate for ecological management as a natural area, higher than best management practices or county ordinances.
- Protect streams and springs from sedimentation, a major impact on stream ecology.
- Continue inventories and increase frequency during spring and fall to track seasonal populations, i.e. migratory birds, spring wildflowers.
- Engage neighbors in discussions of the county's purpose for acquisition, the conservation easement, and their potential role in protection and planning.
- Avoid impervious surfaces when designing trails and amenities to avoid detrimental effects on the hydrology.
- Seek river-related land conservation in the river corridor surrounding Tallassee Shoals and the upper Middle Oconee.
- Avoid fire breaks unless part of a broad-based fire/vegetation management plan.
- Have a measure for management effectiveness (evidence based management).
- Limit access to research and guided tours for educational purposes.
- Manage the open-water wetland for aquatic plant, invertebrate, amphibian diversity.
- Have a management plan that includes maintaining "edges", i.e. forest-floodplain, forest-fields and utility lines, floodplain-levee-river.
- Inform utility companies of the conservation easement and propose restoration projects, e.g. native meadows, and management by selective mowing.
- Control invasive plants, especially in the bottomland forest and other sensitive areas.
- Preserve aesthetic value of the property.
- Begin an archaeological inventory and an oral history.
- Exclude dogs and mountain bikes that disturb plant and animal life on the ground.

Figure 1. Tallassee Tract Basemap



Source: Andrew Saunders, Environmental Coordinator, Athens-Clarke County Unified Government

Figure 2. Tallassee Area Topographic Map



Source: Karen G. Porter

Figure 3. Tallassee Area 1938 USDA Aerial Photograph



Source: October 8, 1937 (USDA Agricultural Adjustment Agency ATG-3-96 1:20,000)

Inventories, Baseline Data and Reports 2011 – 2014

Contributions

- 1) Birds
 - a) Dr. Richard Hall, Odum School of Ecology, UGA; Oconee Rivers Audubon Society
 - b) Dr. Ed Maioriello, Oconee Rivers Audubon Society, BOR Network Services
- 2) Butterflies
 - a) Dr. James W. Porter, Odum School of Ecology, UGA
- 3) Plants
 - a) Linda Chafin, State Botanical Garden of Georgia
 - b) Hugh Nourse
- 4) Trees, Vines and Shrubs
 - a) Dr. Walter Cook
- 5) Streams
 - a) Dr. Amy Rosemond, Odum School of Ecology, UGA
 - b) Dr. Karen Porter, retired, Odum School of Ecology, UGA
- 6) Wetlands
 - a) Dr. Karen Porter, retired, Odum School of Ecology, UGA
- 7) Geology
 - a) Dan Williams, Warnell School of Forestry, UGA
- 8) Reptiles and Amphibians
 - a) Kevin Fouts, Warnell School of Forestry, UGA
- 9) Aquifer Recharge
 - a) Ben Emanuel, American Rivers
- 10) Archaeology and Cultural Resources
 - a) Dr. David Hally, retired, Department of Anthropology, UGA
 - b) Steven Scurry
- 11) Management and Planning
 - a) Nat Kuykendall, retired, Chief of Planning, Denver Service Center, NPS

Compilations, Books and Papers

The Tallassee-Glover Tract, Athens-Clarke County: Ecology, Topography, History and Land Use. Compiled by Dr. Karen Porter, Odum School of Ecology. September 2011.

Rocks of the Tallassee Road Property, Athens-Clarke County Georgia. Daniel Williams, Warnell School of Forestry, 2012.

A Considerable Tract of Country; The Beloved Land of the Oconee Forks. Steven Scurry. Flagpole, November 16, 2011.

Student Senior Projects

Tallassee Forest Management Proposal prepared for the Oconee River Greenway Commission. Jeffrey Kao, Lauren Cameron and Andrew Varela. Warnell School of Forestry. Senior Project, Spring 2013.

Tallassee Wetland. Lauren Cameron, Jeffrey Kao, Shana Pau. Warnell School of Forestry. Wetland Ecology, Spring 2013.

Student Laboratory Reports

Macroinvertebrate and salamander communities of a forested headwater stream: A potential reference condition for the Georgia Piedmont. Phillip Bumpers and Casey Harris. Odum School of Ecology. Limnology Laboratory, ECOL/WASR/FISH 4310/6310, Fall 2011.

Riparian vegetation, stream quality, and channel morphology for three creeks in Athens, GA. Casey Harris. Odum School of Ecology. Limnology Laboratory, ECOL/WASR/FISH 4310/6310, Fall 2011.

Comments and Recommendations by Contributors

Birds

Richard Hall, Ph.D.

Assistant Research Scientist
Odum School of Ecology
University of Georgia
Athens, Georgia 30602

The Tallassee Tract contains a wide array of natural habitats including large stands of old-growth hardwood forest, streams with excellent water quality, extensive areas of river cane, wet bottomland, plus “edges” and open spaces along utility corridors. Those diverse habitats are interdependent upon one another, and to risk segmentation of their resource management as a result of partial ownership is to risk diminishment of their integrity. Because of these qualities, the Oconee River Audubon Society wrote a letter to the mayor and commission in strong support of the purchase of the Tallassee Tract.

That diversity of habitat supports a great diversity of birds and other wildlife. Each spring the woodlands bordering the North and Middle Oconee Rivers act as important stopover sites for migratory birds arriving from the Tropics. Many of these stay to breed in the riparian woodlands around Athens, and the Tallassee Tract provides ideal habitat, including four species of conservation concern. Among the latter is the range-restricted Swainson’s Warbler, found only in the southeastern U.S. The wet bottomlands also provide important wintering habitat for Rusty Blackbirds. This species has declined by 90% across its range, and the Athens area boasts a healthy wintering population of national significance.

The Tallassee tract also provides exciting opportunities for outdoor recreation and environmental education. Our local Audubon chapter has over 400 members in the Athens area who enjoy birds, wildlife and outdoor pursuits, and who would welcome access to the Tallassee Tract.

We also hope that the Tallassee Tract will complement the already-listed State Botanical Garden and proposed listing of Sandy Creek Nature Center and Park on the National Audubon Society’s list of Important Bird Areas (IBA). This select listing provides our state-wide and national membership with noteworthy destinations for the observation and study of birds, providing yet another reason for visitors to include Athens.

We would also be delighted to conduct educational field trips for beginning birders and classroom groups, and to conduct regular surveys to identify the full diversity of breeding and migratory birds

using the Tallassee site. As we already do along Cook's Trail, we have enthusiastic members who regularly volunteer for trail construction, habitat enhancement, maintenance and cleanup.

Ed Maioriello Ph.D.

Director of Network Services
Board of Regents of the University System of Georgia
Athens, Georgia

Our trip was early in the migration, but I still recorded 50 species that morning - not bad at all. Even better than the list of birds we found that day was the delightfully diverse habitat we encountered out there. The open power-line/gas-line cuts provided nice access to open areas alongside successional forest, a nice creek worked its way down quite a way through the forest, there was a nice wetland area to add to the diversity, and some delightfully privet-free bottom land alongside the river. Another extraordinary treat was a Holly forest - something I don't recall experiencing before. I feel that I can speak for the Oconee Rivers Audubon Society in saying that we are very pleased that Athens-Clarke County acquired this tract, and hope that any plans for its development involve a thoughtful conservation plan from the outset.

Butterflies and Skippers

James W. Porter, Ph.D.

Meigs Professor of Ecology
Odum School of Ecology
University of Georgia
Athens, Georgia 30602

From a conservation perspective, Athens-Clarke County's Tallassee Forest is a rare and significant environmental resource. This kind of large, contiguous tract of mature forest and open wetlands is exceedingly rare in the Georgia Piedmont, and certainly unique in the county.

I have been collecting butterflies there and in the adjacent conservation development at Kenney Ridge for about seven years. What started as a hobby has turned into a professional pursuit as the stunning biodiversity of the butterfly fauna became apparent. Of the 90 butterfly species found in Georgia, this land has at least 58. We are still counting. In addition there are 13 of the 20 known Georgia species of Skipper, a group often included with the butterflies. After comparing lists with local lepidopterists I believe that there are more butterfly species here than anywhere else in Athens-Clarke County. Four rare species, the Great Purple Hairstreak, Henry's Elfin, the Green Hairstreak and the Gemmed Satyr are found here, and probably nowhere else in Athens-Clarke County. The Creole Pearly Eye (*Enodia creola*), Southern Pearly Eye (*Enodia portlandia*) and the Lace-Winged or Cane Brake Skipper (*Amblyscrites aesculapies*) rely on Giant Cane as a food source. The Cane Brake Skipper is "cane obligate" and occurs in numbers that are not likely to be found elsewhere in the county.

Many of Georgia's butterfly species were described by University of Georgia Science Professor LeConte in the 1830's. Of particular interest and conservation concern is the Gemmed Satyr. Now exceedingly rare elsewhere in the state, this butterfly is common in the bottomland forest and adjacent forested areas of the Tallassee Tract. On consecutive years (2011 - 2012), we

encountered populations of several hundred individuals, making one of the least common butterflies in the Piedmont, one of the most common butterflies in Tallassee Forest. This butterfly was originally described from specimens found on the University of Georgia campus. While no longer found in town, at least Tallassee Forest preserves it in its type locality.

Tallassee Forest is also notable for an interesting combination of “firsts” in the butterfly world. There are very few other places in North America for which the following list can be made:

- | | | |
|----|--|------------------------------------|
| 1) | The LARGEST butterfly in North America | (The Giant Swallowtail) |
| 2) | The SMALLEST butterfly in North America | (The Pigmy Blue) |
| 3) | The FASTEST butterfly in North America | (The Zebra Swallowtail) |
| 4) | The FARTHEST flying butterfly in the world | (The Monarch) |
| 5) | The OLDEST living butterfly in the world | (The Morning Cloak lives for 1 yr) |
| 6) | The COMMONEST butterfly in North America | (The Cabbage Butterfly) |

Moth collecting in this area also reveals exceptional biodiversity. After only two years of collecting (2013 – 2014), we have already found 785 species. [This collection will eventually be deposited in the University of Georgia Museum of Natural History.] Based on collecting here, and at another river location less than 3 miles away, possibly more than 1,200 species will be found. Since there are 12,000 species described for the North American continent (including Canada), confirming this predicted list would mean that 10% of all described moth species in North America (12,000) will found on this one piece of land.

These numbers of butterfly and moth species are not just impressive; they demonstrate the existence of a local “biodiversity hotspot” that is worthy of preservation. Alternatively, the loss or destruction of the large intact habitats on this tract of land would be a major blow to this region’s biological diversity and ecological integrity.

I applaud conservation efforts for this tract of land. I will contribute both time and money towards its preservation. This one is important.

Plants

Linda Chafin, MS

Conservation Botanist
State Botanical Garden of Georgia
University of Georgia
Athens, Georgia 30605

I have been to the Tallassee Tract on four field trips and visited most of the large, mature habitats. These support a high diversity of native plants. The habitats appear healthy and relatively free of invasives. Most appear to be mature because there has been relatively little disturbance to them when compared with the rest of the county. They are also large and intact which allows the development of large populations of plants and the organisms associated with them. Cool north-facing slopes have species of wildflowers at the southern end of their range. The bottomland forest and River Cane are unusual. The utility easements are good habitats for fall wildflowers and grasses.

There are many places in the county with public access for recreation. These show obvious signs of visitor impact. Tallassee Forest is an exceptional and ecologically important area and it should be protected. I recommend that it be managed as a significant natural area. Public access should be limited to research and guided tours for educational purposes.

Walt Cook, Ph.D.

Warnell School of Forestry, retired
University of Georgia
Athens, Georgia 30602

During 2012-2013 I made an inventory of trees, shrubs and vines as the baseline for the Oconee Rivers Land Trust Conservation Easement. I did not find anything unusual although the amount of American Holly is the most I have seen, but that isn't a big deal. One large tree may be as old as 60 years or more. It probably means it hasn't had any wildfire in the life of the holly forest. Another somewhat unusual thing is the wide variety of species. There are 43 species of trees and shrubs on the list so far.

Wetland and Aquatic Environments

Karen Porter, Ph.D., Certified Senior Ecologist, ESA

Emerita Professor
Odum School of Ecology
University of Georgia 30602
Oconee Rivers Greenway Commission, Commissioner

The tract has diverse aquatic habitats. There are three high priority wetland habitats: 1) a mature bottomland forest, 2) canebrakes and a 3) beaver pond/freshwater marsh. Spring and spring runs and a stream that is a major tributary of the Middle Oconee River are also on the property. The marsh, mature bottomland forest, riparian wetlands, an intact levee and canebrakes are in the floodplain of the Middle Oconee River and extend onto neighboring properties. The floodplain is at 600-610' Elev. and grades abruptly into steep slopes of the upland forest. An old farm road at about 620' Elev. gives easy access to the full extent of the floodplain and the marsh. Occasional flooding in the bottomland was observed during the drought years of 2010 – 2013. A 5-6' water line on trees indicates more flooding in the past. The entire floodplain was inundated with up to 2' of standing water during early 2014.

The mature bottomland forest is dominated by Sweet Gum, Black Cherry, Sycamore and has an open understory with dense areas of River Oats and canebrakes of Giant Cane (*Arundinaria gigantea*). It is not overrun by privet as are most of the floodplains in the county and region. However populations of privet and Nepalese Browntop/Japanese Stiltgrass (*Microstegium* sp.) have increased over that last 5 years. The genetic diversity of cane populations on Tallassee are currently being studied by a group in Plant Sciences at UGA

Only part of the marsh at the base of the stream is owned by the county. It has been visible on USDA aerial photographs since 1938 and has had periods with large areas of open water. On our first visit in 2010, we found that the beaver dam was broken and attempts had made to secure it with metal stakes. A manmade dam of cement bags and plastic sheeting further down stream was also broken.

In the wet spring and summer of 2014 beavers returned to the wetland and rebuilt the upper dam and a lower dam on the stream. The upper dam raised water levels in the marsh and increased the open-water area and flooded adjacent floodplain, a condition that remained through the summer of 2014. The open-water areas have a freshwater marsh flora with at least 7 obligate wetland plant species and 4 facultative wetland species. Dominants include a variety of emergent sedges, rushes, grasses and forbs with scattered buttonbush, red maple, black willow and river birch around the periphery. Obligate wetland plants include Duck-potato, Shallow sedge, Fringed sedge, Buttonbush, American Bur-reed, Woolgrass, and Lizard's tail.

Privet is relatively uncommon in the floodplain. It occurs as large shrubs and scattered smaller plants. It hasn't taken over the floodplain as it has along the greenway at Sandy Creek, the State Botanical Garden and in large riparian areas throughout the county and region. I recommend that disturbing the soil, clearing, mowing or other activities that bring in equipment that can transport invasives to the floodplain and wetland be kept to a minimum.

The minimal presence of privet warrants its removal before it can take over the floodplain destroying these significant habitats. I recommend taking advantage of the expertise of Jim Hanula of the Natural Forest Service to eradicate the large stands. On a visit to the property with him in 2012 he stated that his team could control the large stands leaving a small population that could be managed by the county or volunteers.

Canebrakes in the floodplain and the beaver pond-freshwater marsh are two of the threatened high priority habitats in the Southeast. They provide important habitat and food resources for several of the region's threatened and rare species of birds and butterflies. Giant Cane has all but disappeared from the southeast. Beaver pond marshes have disappeared from the southeast due to development altering the hydrology of watersheds and drought.

The stream flowing north-south on the east side of the tract is one of the cleanest in the region. It is a forested stream with most productivity supported by incoming leaf litter and other detritus. Although a thorough study has not been done we know that the diversity of streams on the original tract is high with 13 families of aquatic invertebrates. Complex food webs and the presence of 1-2 year old top predator species indicate a stream environment sufficiently stable to maintain food chains for at least 1 year. A UGA limnology class of Dr. Amy Rosemond and a Hydrology class of Todd Rasmusen studied the stream in Fall 2014.

The stream originates on properties to the north. A spring once flowed on what is now the grounds of Burney Harris Lyons Middle School on Tallassee Road. Storm water currently flows from the school ground through a storm sewer, becomes a stream on the Rivercliff Subdivision and flows onto private property to the north of the utility easements before reaching the Tallassee Tract. Two ponds in Rivercliff Subdivision and an adjacent farm pond also feed the stream.

The stream crosses the utility easements and is in full sun in that area. There is obvious sedimentation in the stream and springs from activities on the utility easements. Several conduits are in place on the easements. There is a ford on the stream at the base of a road on the Colonial Pipeline easement. The road is deeply eroded sending sediment into the stream. The stream becomes the eastern boundary of the property below the utility easements. Two spring-fed streams join it, one from the adjacent property to the east and another from the west. Promoting awareness of the conservation easement and the purpose for property acquisition with neighbors and utility companies is essential for preservation of stream integrity.

Reptiles and Amphibians

Kevin Fouts, MS student

Warnell School of Forestry
University of Georgia
Athens, Georgia 30602

The wetland at the base of the stream was the only wetland included in this inventory. Due to research and academic obligations of the observer, inventories were not conducted during some important breeding periods for the region; thus this list likely represents only a proportion of the herpetofauna inhabiting the Tallassee Tract. Sampling was also not robust enough to account for rare or more cryptic species. Some species (Rat Snake, Queen Snake, Red Salamander, Three-lined Salamander, etc.) were observed in or proximal to the stream that passes through the wetland. On August 29, 2013, Todd Pierson and I witnessed as mass emergence of Narrowmouth Toads larger than either of us had seen before.

March visits indicate the hydroperiod in the wetland may often be too short for sufficient recruitment of some species requiring less ephemeral aquatic habitats. Restoring the dam could potentially increase species richness without deleterious effects on the species currently known to inhabit the wetland.

Hydrology

Ben Emanuel

Associate Director, Water Supply
American Rivers, Southeast Office
Decatur, Georgia 30030

I had the opportunity to hike with a small group over many miles of the 570-acre tract of land between the Middle Oconee River and Tallassee Road near the Rivercliff neighborhood just downstream from Tallassee Shoals in northwestern Athens-Clarke County. The tract is not only very beautiful, but also very valuable from the standpoint of conserving land that stands in high-quality forest near the Oconee River.

Both the topography and the forests of the tract are impressive. The oak-hickory forest (dominated by white oak) along rolling hills above the river floodplain throughout the western portion of the property appears quite mature for our area. The Northern Red Oak-dominated canopy above the grove of mature American Holly on a long, wide east-facing slope above the large stream on the eastern side of the tract appears even more impressive in height. The few small areas currently or formerly planted in pine on some of the tract's uplands detract only slightly from the overall forest quality of the tract.

The northwestern part of the tract, meanwhile, is home to steep ravine slopes along small, spring-fed streams flowing westward to the Middle Oconee River. It is rare to see ravine slopes like these so close to the river and within an intact wooded river corridor anywhere in the upper Oconee River basin. I would be surprised if they are not found to be botanically significant. Additionally, the vigorous flow of one of these small streams during the drought conditions when I visited is a testament to the intact, healthy hydrology that's in place in such a well-wooded area. (In my opinion it would be best, even and especially in planning any potential trails for this area, to avoid

the installation of any paved surfaces, as such would be a detriment the hydrology of the area as well as its general character.)

The small stream anecdotally demonstrates the fact that this well-wooded area probably possesses very good capacity for groundwater recharge – an important consideration in a section of the Middle Oconee watershed just a few miles upstream of an Athens-Clarke County drinking water intake. It is a reminder, also, that the smart land-conservation plans in place along the upper North Oconee River and Sandy Creek in Athens-Clarke County ought to be mirrored along the Middle Oconee River, too. With this goal in mind, a brief glance at aerial photography reveals the entire river corridor near Tallassee Shoals – this tract included – to be a prime target area for river-related land conservation. I hope it can be permanently preserved.

Archaeology

David Hally, Ph.D.

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I have looked at the State Archaeological Site Files (at UGA) records for Clarke Co. Only two archaeological sites are listed for the area encompassed by the Tallassee-Glover Tract. One of them, 9CA68, is an isolated artifact – the basal portion of a fluted projectile point. Such points are among the earliest known in the Southeast, dating 10,000 – 8,500 BP. The artifact could mark a Paleo-Indian camp or kill site, or it could be an isolated discard or lost item. The second site, 9CA69, is a mid-19 century wooden structure. I don't know when the site form was submitted to the site file. It is possible that the structure has since collapsed.

The ridgeline running north/south through the tract could have one or more 16th century aboriginal farmsteads located on it, but without fairly intensive on-the-ground survey, we won't know. There are a number of sites of this type in Oconee, Greene and Putnam counties, but the Lamar culture responsible for them is centered around Lake Oconee and may not extend north to Clarke.

The only way you are going to determine whether there are additional aboriginal and historic sites located in the tract is to have an intensive shovel-test survey conducted. This could cost several thousand dollars and even then might fail to find sites that are present. The problem is that the forest obscures evidence of sites.

[Additional cultural history: Pottery sherds from the Mississippian Period and numerous arrowheads have been found on the tract. There is a grouping of three piles of quartz stones at approximately 640' Elev. south of the utility easements. In conversations with me Dr. Hally stated that quartz mounds of this type are found in the Southeast and some are of prehistoric origin. These at Tallassee may have been made by farmers sorting field stones or they may have archaeological significance.

When the English arrived in the mid-1700s they found the Creeks using the area for fishing, deer hunting and farming. Tallassee Mico, or Tallassee King is said to have had a cabin at the highest point (850' Elev.) in the area which is near the intersection of Tallassee and John Collier Roads. He and other Creek and Cherokee Chiefs negotiated a 1790 treaty with George Washington in New

York City. At that time John Trumbull drew his now well-known portrait. There are sites of 19th and 20th century houses and an unusual pit and trough with parts of pumps just above the floodplain. The Fowler family owned the property at one time and a descendant still lives on Tallassee Road. The website for Fowler Family Farm describes their land use during the 1900s and states that they are the 9th generation of non-native residents. An oral history of the living descendants of the Fowlers would be of great value.]

Planning and Management

Nat Kuykendall, MS

Chief of Planning, retired
Denver Service Center
National Park Service
Oconee Rivers Greenway Commission, Vice Chair

Management planning for a protected area such as the Tallassee Tract generally follows a three-tiered process which should be logical, trackable, and anchored in law, policy, regulations and public involvement. Planning starts with (1) a clear statement(s) of purpose (aka “vision”, “mission”) to define the ultimate intent and value of managing the area. Once the purpose of the area is broadly defined, (2) more specific management objectives follow, stated positively as desired conditions and management zones. Finally, (3) implementation actions – including proposed development, programs, staffing, and associated costs – are linked to the management objectives. Terminology varies by agencies and organizations, but these three components are usually present in some form as part of goal-driven planning.

For the Tallassee Tract the most pertinent legal document related to the purpose of the area is the conservation easement, the legally binding management agreement between the county and the Oconee River Land Trust. Policy statements in Athens Clarke County (ACC) ordinances for the Oconee Rivers Greenway and the Greenspace Program should also be addressed in developing purpose statements for Tallassee.

Management objectives are developed consistent with the purpose of the area and with analysis of the resources, regulatory requirements (including restrictions in the Tallassee conservation easement), and potential for appropriate public use. Management objectives are generally organized by natural resource desired conditions, cultural resource desired conditions, and desired visitor experiences and activities, each with appropriate subdivisions (e.g., cultural resources could include archeological resources, historic resources, and oral history). Legally binding agreements that do not conform to the conservation objectives of the area, such as utility rights of way, need to also be identified and addressed.

Management zoning is in effect the application of management objectives to the landscape. Management zones represent and communicate to the public, as well as park managers, the primary management or experiential intent within specific areas of the park. For instance, an area that supports rare species or an exceptional ecological community may be mapped as a “sensitive resource” or “protected area” zone where public access is strictly controlled or prohibited, natural conditions and processes predominate, and monitoring and research may be a high priority. In contrast, a more general designation, such as the “conservation zone” in the Oconee Rivers Greenway Network Plan, allows for a range of public activities within the context of resource protection and nature appreciation and education.

Conserving native plants and animals and the habitats that support them is the ultimate goal of ecological management. This often means allowing natural processes to occur with little or no intervention, e.g., not mowing open areas and allowing succession to proceed. Forest fragmentation is a major issue throughout much of the US, and an important value of the Tallassee property is the largely unbroken forested area it encompasses. Open habitats abound in the county and region, even on the Tallassee tract where utility corridors will continue to be actively cleared. The justification for intervening to maintain other openings and/or special plantings would be if a rare or listed species, special habitats, or cultural landscapes were specifically identified for protection and dependent on such interventions.

Ecosystem management generally allows natural processes to proceed, even when the result may not be as aesthetically pleasing as a more highly managed landscape. For example, the Southern pine beetle is a native insect and is part of the natural forest dynamic in the Piedmont. In an area managed for ecosystem processes such as Tallassee, the loss and succession of native vegetation due to natural processes such as native insects and diseases are not “unhealthy,” but are part of the dynamics of the area.

Fire is natural process that is a special management challenge. The Tallassee Tract would benefit from a fire/vegetation management plan that includes management objectives by land units and the appropriate application of a range of management tools, including prescribed fire and other pre-suppression actions. If new firebreaks are created, they should be professionally designed to be effective with minimal environmental and aesthetic impacts.

As with planning for any public lands, public engagement is an important part of the process. Early on, the Athens-Clarke County government has initiated an integrated public involvement program for the Tallassee planning effort. For example, the county established an advisory Tallassee Tract “advisory group,” with representatives of public and non-profit organizations involved with conservation in the county. The planning process also includes use of the internet for distribution of information and receipt of comments from interested citizens, as well as a series of public meetings.

Geology

Daniel D. Williams, MS

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The holly forest covers a substantial amount of county land south of the ROWs. The Geologic Map (Figure 4.) approximates its extent where it is underlain by mostly quartz muscovite schist and hematite quartzite (AKA granofels). Both of these rock types, especially hematite quartzite are resistant to weathering and consequently form ridge tops and upper slopes. The holly forest should be protected and studied. I don't know of any forest that large where American holly dominates the subcanopy and understory. Some potential research associated with these unique assembles arise: does rock chemistry affect soil chemistry and does that favor holly? Does the iron in the hematite quartzite play a role? Are there other plants and animals associated with this kind of forest?

The northwest corner of the Geologic Map shows sample sites on the adjacent property above the ROWs and next to the Kenney Ridge subdivision. The area along the two creeks is the most geologically interesting part of the forest. It differs geologically from the land below the ROWs that belong to the county. The granite gneiss outcrops on the upper forks of the creeks may harbor interesting plants, and their picturesque character will surely attract people. Some of the granite gneiss has abundant feldspar, an easily eroded mineral. Steep slopes in this area could also facilitate erosion if it gets started.

Amphibolite (metamorphic basalt lava/pluton) occurs along these same creeks and the intervening ridge. It seems to crop out roughly along the 700-foot topographic contour (though this may be merely a sampling phenomenon). Amphibolite contains more calcium than other rocks, and could potentially enhance plant life where it occurs. This has not been shown (to my knowledge) at Tallassee, but a fairly thorough plant study of this area should be done. Public access trails should avoid any areas where special plants reside.

Educational group access seems like a good thing. Groups should be accompanied by a forest representative or held accountable in some way. It's easy for a group to misinterpret management's wishes relating to the footprint they leave.

I recommend that dogs and mountain bikes be excluded because they disturb plant and animal life on the ground. For that same reason, trails must be built before people are allowed to hike on the property.

Naturalist Comments

Roger Nielsen, BS

Public Relations Coordinator
Carl Vinson Institute of Government
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The tract contains outstanding examples of Piedmont wildflowers, upland American holly and riparian cane habitats and some fine specimens of mature trees. I'd like to see all of that protected as best as possible. Managing to prevent incompatible uses would help – making access difficult for those who would damage or destroy also limits the number of plant-nappers and firewood-gatherers. Land managers can cooperate with utilities that manage the easements. Any management plan aimed for preservation and stabilization, in my opinion, needs to address two broad topics: trespass and incompatible uses, and controlling invasive plants.

Inventories

Tallassee Forest Bird Species

Total: 65 **Dates: April - May 2012, April 2013**

Observed by: Dr. Richard Hall, Odum School of Ecology, UGA; Dr. Edward Maioriello, Oconee River Audubon Society

Acadian Flycatcher <i>Empidonax virescens</i>	Carolina Wren <i>Thryothorus ludovicianus</i>	Hooded Warbler <i>Setophaga citrina</i>
American Crow <i>Corvus brachyrhynchos</i>	Cedar Waxwing <i>Bombycilla cedrorum</i>	House Finch <i>Haemorhous mexicanus</i>
American Goldfinch <i>Spinus tristis</i>	Chipping Sparrow <i>Spizella passerina</i>	Indigo Bunting <i>Passerina cyanea</i>
American Robin <i>Turdus migratorius</i>	Common Grackle <i>Quiscalus quiscula</i>	Kentucky Warbler <i>Geothlypis formosa</i>
Barn Swallow <i>Hirundo rustica</i>	Common Yellowthroat <i>Geothlypis trichas</i>	Louisiana Waterthrush <i>Parkesia motacilla</i>
Belted Kingfisher <i>Megasceryle alcyon</i>	Downy Woodpecker <i>Picoides pubescens</i>	Mourning Dove <i>Zenaida macroura</i>
Black Vulture <i>Coragyps atratus</i>	Eastern Bluebird <i>Sialia sialis</i>	Northern Cardinal <i>Cardinalis cardinalis</i>
Blue Jay <i>Cyanocitta cristata</i>	Eastern Phoebe <i>Sayornis phoebe</i>	Northern Flicker <i>Colaptes auratus</i>
Blue-gray Gnatcatcher <i>Poliophtila caerulea</i>	Eastern Towhee <i>Pipilo erythrophthalmus</i>	Northern Mockingbird <i>Mimus polyglottos</i>
Black-and-white Warbler <i>Mniotilta varia</i>	European Starling <i>Sturnus vulgaris</i>	Northern Parula <i>Setophaga americana</i>
Brown Thrasher <i>Toxostoma rufum</i>	Fish Crow <i>Corvus ossifragus</i>	Ovenbird <i>Seiurus aurocapilla</i>
Brown-headed Cowbird <i>Molothrus ater</i>	Great Crested Flycatcher <i>Myiarchus crinitus</i>	Pileated Woodpecker <i>Dryocopus pileatus</i>
Brown-headed Nuthatch <i>Sitta pusilla</i>	Hairy Woodpecker <i>Picoides villosus</i>	Pine Siskin <i>Spinus pinus</i>
Carolina Chickadee <i>Poecile carolinensis</i>	Hermit Thrush <i>Catharus guttatus</i>	Pine Warbler <i>Setophaga pinus</i>

Prothonotary Warbler
Protonotaria citrea

Red-bellied Woodpecker
Melanerpes carolinus

Red-eyed Vireo
Vireo olivaceus

Red-headed Woodpecker
Melanerpes erythrocephalus

Red-shouldered Hawk
Buteo lineatus

Red-tailed Hawk
Buteo jamaicensis

Red-winged Blackbird
Agelaius phoeniceus

Ruby-crowned Kinglet
Regulus calendula

Ruby-throated Hummingbird
Archilochus colubris

Scarlet Tanager
Piranga olivacea

Song Sparrow
Melospiza melodia

Summer Tanager
Piranga rubra

Swamp Sparrow
Melospiza georgiana

Tufted Titmouse
Baeolophus bicolor

Turkey Vulture
Cathartes aura

White-breasted Nuthatch
Sitta carolinensis

White-eyed Vireo
Vireo griseus

White-throated Sparrow
Zonotrichia albicollis

Wood Thrush
Hylocichla mustelina

Yellow-billed Cuckoo
Gavia adamsii

Yellow-rumped Warbler
Setophaga coronata

Yellow-throated Vireo
Vireo flavifrons

Yellow-throated Warbler
Setophaga domin

Tallassee Forest Butterfly Species

Total: 58

Dates: 2011 – 2014

Observer: Dr. James Porter, Odum School of Ecology, UGA

American Copper <i>Lycaena phlaeas</i>	Creole Pearly Eye <i>Enodia creola</i>	Juniper Hairstreak <i>Callophrys gryneus</i>
American Lady <i>Vanessa virginiensis</i>	Eastern Comma <i>Polygonia comma</i>	Little Sulphur <i>Pyrisitia lisa</i>
American Snout <i>Libytheana carinenta</i>	Eastern Tailed Blue <i>Cupido comyntas</i>	Little Wood Satyr <i>Megisto cymela</i>
Appalachian Blue <i>Glaucopsyche lygdamus</i>	Falcate Orange-Tip <i>Anthocharis midea</i>	Monarch <i>Danaus plexippus</i>
Appalachian Brown <i>Satyrodes appalachia</i>	Gemmed Satyr <i>Cyllopsis gemma</i>	Morning Cloak <i>Nymphalis antiopa</i>
Appalachian Azure <i>Celastrina neglecta</i>	Giant Swallowtail <i>Papilio cresphontes</i>	Northern Pearly Eye <i>Enodia anthedon</i>
Banded Hairstreak <i>Satyrion calanus</i>	Goatweed Leafwing <i>Anaea andria</i>	Orange Sulphur <i>Colias eurytheme</i>
Black Swallowtail <i>Papilio polyxenes</i>	Gray Hairstreak <i>Strymon melinus</i>	Painted Lady <i>Vanessa cardui</i>
Cabbage White <i>Pieris rapae</i>	Great Purple Hairstreak <i>Atlides halesus</i>	Palamedes Swallowtail <i>Papilio palamedes</i>
Carolina Satyr <i>Hermeuptychia sosybius</i>	Great Southern White <i>Ascia monuste</i>	Pearl Crescent <i>Phyciodes tharos</i>
Checkered White <i>Pontia protodice</i>	Great Spangled Fritillary <i>Speyeria cybele</i>	Pipevine Swallowtail <i>Battus philenor</i>
Cloudless Sulphur <i>Phoebis sennae</i>	Gulf Fritillary <i>Agraulis vanillae</i>	Question Mark <i>Polygonia interrogationis</i>
Common Buckeye <i>Junonia coenia</i>	Hackberry Emperor <i>Asterocampa celtis</i>	Red Admiral <i>Vanessa atalanta</i>
Common Wood Nymph <i>Cercyonis pegala</i>	Harvester <i>Feniseca tarquinius</i>	Red Spotted Purple <i>Limenitis arthemis</i>
Coral Hairstreak <i>Satyrion titus</i>	Henry's Elfin <i>Callophrys henrici</i>	Red-Banded Hairstreak <i>Calycopis cecrops</i>

Silvery Checkerspot
Chlosyne nycteis

Sleepy Orange
Abaeis nicippe

Southern Pearly Eye
Enodia portlandia

Spice-Bush Swallowtail
Papilio troilus

Spring Azure
Celastrina ladon

Summer Azure
Celastrina neglecta

Tawny Emperor
Asterocampa clyton

Tiger Swallowtail
Papilio glaucus

Variegated Frillillary
Euptoieta claudia

Viceroy
Limenitis archippus

Viola's Wood Satyr
Megisto viola

White M Hairstreak
Parrhasius m-album

Zebra Swallowtail
Eurytides marcelu

Tallassee Forest Skipper Species

Total: 13

Dates: 2011 – 2014

Observer: Dr. James Porter, Odum School of Ecology, UGA

Common Checkered
Skipper *Pyrgus communis*

Dun Skipper
Euphyes vestris

Fiery Skipper
Hylephila phyleus

Hoary Edge Skipper
Achalarus lyciades

Horace's Duskywing
Erynnis horatius

Juvenal's Duskywing
Erynnis juvenalis

Lace-Winged/Cane Break
Skipper
Amblyscirtes aesculapius

Little Glassy Wing
Pompeius verna

Long-Tailed Skipper
Urbanus proteus

Ocola Skipper
Panoquina ocola

Silver-Spotted Skipper
Epargyreus clarus

Yucca Skipper
Megathymus yuccae

Zabulon Skipper
Poanes zabulon

Tallassee Forest Plant Species (Wildflowers, Trees, Vines, Shrubs and Wetland* Plants)

Total: 137 Dates: March - April 2012, Summer 2012, 2013, Fall 2014

Observed by: Dr. Linda Chafin, State Botanical Garden of Georgia, Dr. Walter Cook; Hugh Nourse; Dr. Karen Porter, Odum School of Ecology, UGA

Alumroot <i>Heuchera americana</i>	Black Walnut <i>Juglans nigra</i>	Catesby's Trillium <i>Trillium catesbaei</i>
American Beech <i>Fagus grandifolia</i>	Black Willow <i>Salix nigra</i> *	Chalk Maple <i>Acer leucoderme</i>
American bur-reed <i>Sparganium americanum</i> *	Bloodroot <i>Sanguinaria canadensis</i>	Chinese Privet <i>Ligustrum sinense</i>
American Holly <i>Ilex opaca</i>	Blue Curls <i>Trichostemum dichotomum</i>	Christmas Fern <i>Polystichum acrostichoides</i>
Angle-pod Milkvine <i>Gonolobus suberosus</i>	Blue Star <i>Amsonia tabernaemontana</i>	Climbing Hydrangea <i>Decumaria barbara</i>
Arrowhead, Duck-potato <i>Sagittaria latifolia</i> *	Box Elder <i>Acer negundo</i>	Common Blue Violet <i>Viola sororia</i>
Autumn olive <i>Elaeagnus umbellata</i>	Brachen fern <i>Pteridium aquilinum</i>	Cottonwood <i>Populus deltoides</i>
Basswood <i>Tilia americana</i>	Broad Beech Fern <i>Phegopteris hexagonoptera</i>	Cross-Vine <i>Bignonia capreolata</i>
Beauty-Berry <i>Callicarpa americana</i>	Broom-Sedge Grass <i>Andropogon virginicus</i>	Cutleaf Toothwort <i>Cardamine concatenata</i>
Bigtop Love Grass <i>Eragrostis hirsuta</i>	Buttonbush <i>Cephalanthus occidentals</i> *	Deerberry <i>Vaccinium stamineum</i>
Black Cherry <i>Prunus serotina</i>	Callico Aster <i>Symphyotrichum lateriflorum</i>	Dog Hobble <i>Leucothoe fontanesiana</i>
Black Cohosh <i>Actaea racemosa</i>	Carolina Buckthorn <i>Frangula caroliniana</i>	Doll's Eyes <i>Actaea pachypoda</i>
Black Gum <i>Nyssa sylvatica</i>	Carolina lily <i>Lilium michauxii</i>	Dwarf Pawpaw <i>Asim ina parviflora</i>
Black Oak <i>Quercus velutina</i>	Carolina Silverbell <i>Halesia carolina</i>	Eastern Red Cedar <i>Juniperus virginiana</i>

Featherbells <i>Stenanthium gramineum</i>	Horse-sugar, Sweetleaf <i>Symplocos tinctoria</i>	Painted or Georgia Buckeye <i>Aesculus sylvatica</i>
Flowering Dogwood <i>Cornus x virginiana</i>	Jack-in-the-Pulpit <i>Arisaema triphyllum</i>	Pawpaw Tree <i>Asimina triloba</i>
Fringed Loosestrife <i>Lysimachia ciliata</i>	Japanese honeysuckle <i>Lonicera japonica</i>	Pennywort <i>Hydrocotyle sp.</i>
Fringed Sedge <i>Carex crinita*</i>	Japanese Stilt-Grass <i>Microstegium vimineum</i>	Persimmon <i>Diospyros virginiana</i>
Giant Cane, River Cane <i>Arundinaria gigantea*</i>	Lion's-foot, Gall-of-the-Earth <i>Nabalus serpentarius</i>	Piedmont Azalea <i>Rhododendron canescens</i>
Giant Chickweed <i>Stellaria pubera</i>	Liverleaf, Hepatica <i>Anemone americana</i>	Pignut Hickory <i>Carya glabra</i>
Gill-over-the-ground <i>Glechoma hederacea</i>	Lizard's Tail <i>Saururus cernuus*</i>	Pipsissewa <i>Chimaphila maculata</i>
Grass-leaved Blazing Star <i>Liatris graminifolia</i>	Loblolly Pine <i>Pinus taeda</i>	Poison ivy <i>Toxicodendron radicans</i>
Grass-leaved Goldenaster <i>Pityopsis graminifolia</i>	Mayapple <i>Podophyllum peltatum</i>	Post Oak <i>Quercus stellata</i>
Green Ash <i>Fraxinus pennsylvanica</i>	Mayberry, Elliott's Blueberry <i>Vaccinium elliotii</i>	Purple-Top or Greasy Grass <i>Tridens flavus</i>
Greenbriar <i>Smilax rotundifolia</i>	Milk-Pea <i>Galactia regularis</i>	Rattlesnake Fern <i>Botrypus virginianus</i>
Hammock Spiderlily <i>Hymenocallis occidentalis</i>	Mockernut Hickory <i>Carya tomentosa</i>	Rattlesnake Plantain <i>Goodyera pubescens</i>
Hawkweed <i>Hieracium venosum</i>	Mountain Laurel <i>Kalmia latifolia</i>	Red Maple <i>Acer rubrum</i>
Hedge-hyssop <i>Gratiola sp.</i>	Muscadine <i>Vitis rotundifolia</i>	Redbud <i>Cercis canadensis</i>
Highbush Blueberry <i>Vaccinium corymbosum</i>	Musclewood, Ironwood <i>Carpinus caroliniana</i>	Redroot Flatsedge <i>Cyperus erythrorhizos</i>
Honey Locust <i>Gleditsia triacanthos</i>	Northern Red Oak <i>Quercus rubra</i>	River Birch <i>Betula nigra</i>
Hop Hornbeam <i>Ostrya virginiana</i>	Osage Orange <i>Maclara pomifera</i>	River Oats <i>Chasmanthium latifolium*</i>

Rue Anemone
Thalictrum thalictroides

Sand Hickory
Carya pallida

Sassafras
Sassafras albidum

Sawtooth Oak [exotic]
Quercus acutissima

Sericea Lespedeza
Lespedeza cuneata

Serviceberry
Amelanchier arborea

Shallow Sedge
*Carex lurida**

Shortleaf Pine
Pinus echinata

Silver Plume Grass
Saccharum alopecuroides

Smooth Trailing Lespedeza
Lespedeza repens

Soft Rush
*Juncus effusus**

Solomon's Seal
Polygonatum biflorum

Sourwood
Oxydendrum arboreum

Southern Grape Fern
Sceptridium bitermum

Southern Lady Fern
Athyrium asplenoides

Southern Red Oak
Quercus falcata

Sparkleberry
Vaccinium arboreum

Spicebush
Lindera benzoin

Splitbeard Grass
Andropogon ternarius

Swamp Nettle
*Boehmeria cylindrica**

Sweet Gum
Liquidambar styraciflua

Switch Cane
Arundinaria tecta

Three-parted Yellow Violet
Viola tripartita

Trifoliate or Hardy Orange
Citrus trifoliata

Trumpet Creeper
Campsis radicans

Tulip Tree
Liriodendron tulipifera

Virginia Creeper
Parthenocissus quinquefolia

Water Horehound
Lycopus rubellus

White Mulberry
Morus alba

White Oak
Quercus alba

Wild Geranium
Geranium maculatum

Wild Ginger
Hexastylis arifolia

Winged Elm
Ulmus alata

Wingstem, Crownbeard
Verbesina alternifolia

Wingstem, Crownbeard
Verbesina oppositifolia

Winterberry
Ilex verticillata

Witch Hazel
Hamamelis virginiana

Woods Oats, Longleaf
Spikegrass
Chasmanthium sessiliflorum

Wool-grass Bulrush
*Scirpus cyperinus**

Yellow Jessamine
Gelsemium sempervirens

Yellow Stargrass
Hypoxis hirsuta

Yellow Wood Sorrel
Oxalis dillenii

Yellowroot
Xanthorhiza simplicissima

Violet Wood-sorrel
Oxalis violaceae

Tallassee Forest Reptile and Amphibian Species

Total: 22 **Dates: March - April 2013**

Observed by: Kevin Fouts, Warnell School of Forestry, UGA

American Toad
Anaxyrus americanus

Black Rat Snake
Pantherophis obsoleta

Eastern Box Turtle
Terrpene Carolina

Eastern Narrowmouth
Toad
Gastrophryne carolinensis

Eastern Spadefoot Toad
Scaphiopus holbrookii

Five-Lined Skink
Eumeces fasciatus

Green Frog
Lithobates clamitans

Northern Cricket Frog
Acris crepitans

Northern Water Snake
Nerodia sipedon

Pickerel Frog
Lithobates palustris

Queen Snake
Regina septemvittata

Red Salamander
Pseudotriton ruber

Red-Spotted Newt
Notophthalmus viridescens

Ringneck Snake
Diadophis punctatus

Southern Dusky Salamander
Desmognathus conanti

Southern Leopard Frog
Lithobates sphenoccephala

Southern Two-lined
Salamander
Eurycea cirrigea

Spotted Salamander
Ambystoma maculatum

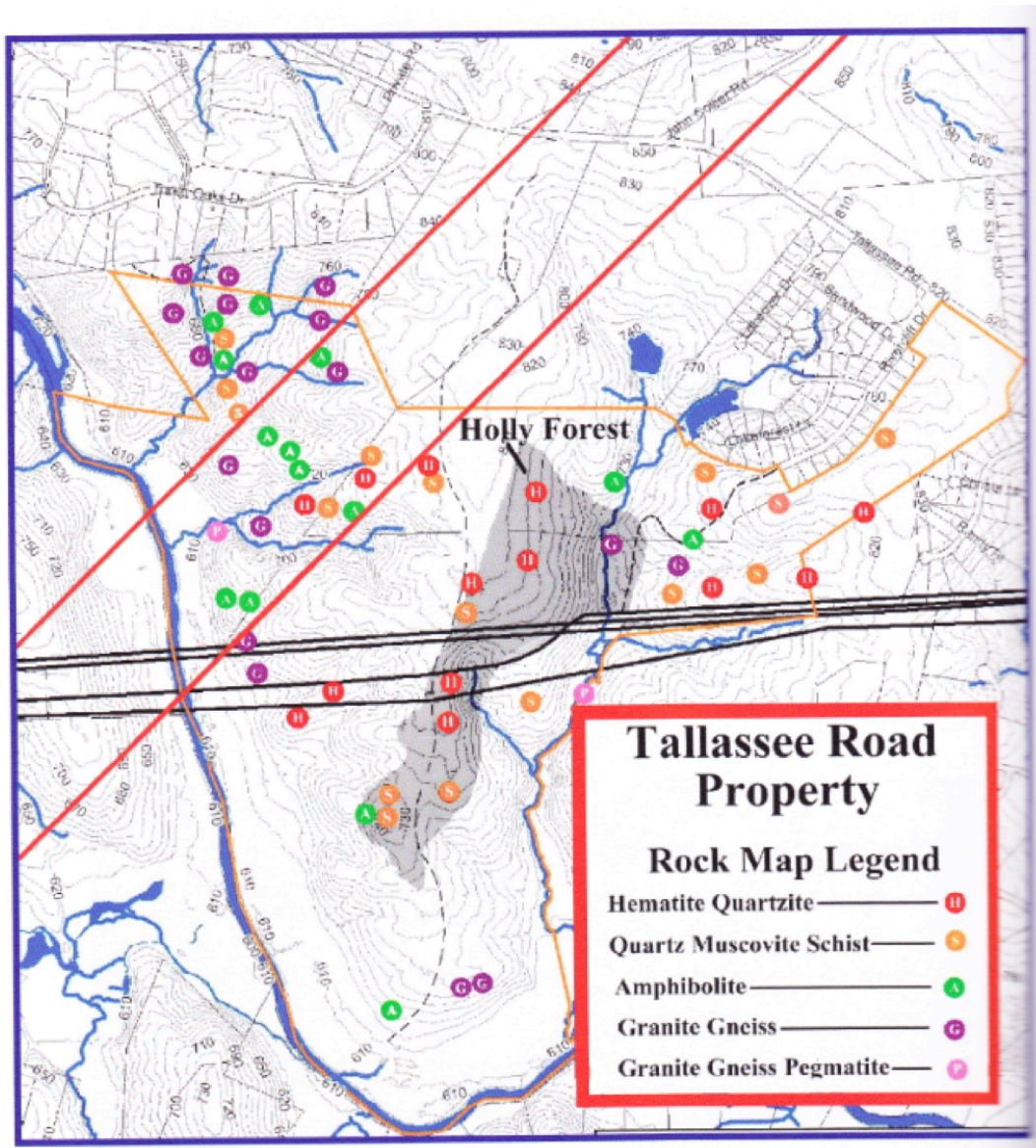
Spring Peeper
Pseudacris crucifer

Three-lined Salamander
Eurycea guttolineata

Upland Chorus Frog
Pseudacris feriarum

Worm Snake
Carphophis amoenus

Figure 4. Geologic Map



From Rocks of the Tallassee Road Property, Athens-Clarke County Georgia. Dan Williams. June, 2012.
williams@warnell.uga.edu

Figure 5. A Considerable Tract of Country

A CONSIDERABLE TRACT OF COUNTRY

The Beloved Land of the Oconee Forks

In 1790, the people of the Muscogee-Creek Nation were anticipating the results of their peace embassy to New York, sent there by invitation to meet with President Washington and his cabinet, and their protracted war with Georgia over the Oconee River basin. Central to peace was a final settlement and demarcation of a boundary between the Creek Nation and the State of Georgia. The Creek delegates knew what compromises would be acceptable to their people, and largely achieved these goals, including the recovery of lands along their southern border with Georgia.

Back in the Creek Nation, the provisions, including one establishing the Oconee River as the western limit to Georgia settlement, were well received by assembled leaders. However, when the treaty line was explained, the council found Georgia's boundary to extend across the Oconee headwaters to the South Fork, or Apalachee River. This was out of the question for many of the leading headmen, and in a dramatic show of protest, they threw their tobacco into the council fire in disgust. Their view prevailed in subsequent assemblies, and the standing of at least one Creek leader was irreparably damaged over the issue. As far as the Creek Nation was concerned, Georgia would have nothing west of the North Oconee River.

Although trifling when seen on a map, the land in the Forks of Oconee was "Atchakee": sacred, beloved, holy ground. Through the heart of this country, which today incorporates the counties of Clarke, Jackson, Barrow, Oconee and Banks, flows the Middle Oconee River. A major shoal along its course bears the name Tallassee. This was the name of a large Creek tribal town located near the center of the Nation. The special interest which the people of Tallassee and Creek leaders like Tallassee Mico held in the Oconee Forks strongly indicates that the town maintained winter settlements here, from which its people fished, hunted, traded. These winter settlements at the shoals may have saved Tallassee Mico's vision of restoring the "Beloved Path": trade with Georgia and hunting rights east of the North Oconee.

The bond which Tallassee and other Creek towns held for the Forks suggests a far older link. Ruins of ancient fish weirs are visible in the river bed; pottery shards are readily found where the grounds have been disturbed, and notable cairns of select white quartz—all are evidence of this older bond. Bottomlands here are choice agricultural sites, and clay deposits are abundant in the river banks.

As early as 1773, before the outbreak of the Revolutionary War, Georgia leaders had learned of the unyielding devotion the Creek people held for the Oconee country. It was then that Creek leaders informed Georgia of the Oconee's "Beloved" status: a status reserved for the exceptionally valuable. The earliest Georgia surveys of the Oconee valley occurred during the Revolution: they provoked a violent response by the Creek people and played a role in bringing them into an otherwise exclusively Anglo civil war.

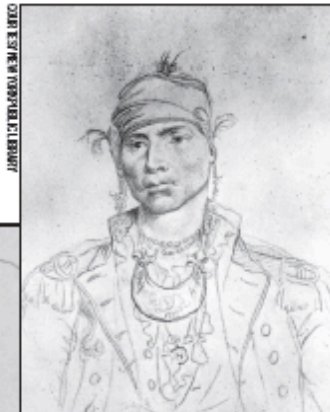
It was in the interests of peace and the restoration of trade that Tallassee Mico met with Georgians after the Revolution in the fall of 1783. State leaders needed land to meet their obligations to veterans who fought for Georgia's independence. And so it was with caution that Tallassee Mico promoted a compromise: the state would gain land on the eastern bank of the Oconee, for restoring the "Old Beloved Path," linking Georgia and the Creek nation in new bonds of friendship and trade. In laying the foundation for this peaceful and profitable

relationship, he made two important conditions for his support: hunting rights would continue in the ceded lands until actual settlement, and Georgia must accept the "first water" of Oconee as the boundary line.

Georgia honored none of his conditions, and breaking established protocol, never troubled itself with gaining the Creek Nation's ratification of the proposed treaty. For the Georgians, Tallassee Mico's signature was enough, and immediate surveys began under armed escort. Repeated warnings from Creek councils were not taken seriously, and promotion of new Georgia land for Anglo settlement went forward. Beginning in 1786, the Oconee War broke up Georgia's new settlements and nearly ruined the state's economy.

This was the war which brought Georgia to adopt the U.S. Constitution unanimously, in anxious expectation of federal intervention. This was the war which

up, forty or fifty miles higher; besides that the white people had built two or three houses on this side... I heard, that the Cowetas were just going out to drive off all the stocks and kill some of the inhabitants... I have had more complaints laid before me of the like nature... that the white people come and encamped out, thirty or forty miles on this side of the river, and hunted, with fire, and all day with rifles, and destroyed the game so bad, that they can hardly find a turkey or a deer to kill, and with great gangs of dogs hunting bear; this the Indians say they cannot put up with..." [American State Papers, Indian Affairs, Vol. 1, p. 381]



A 1790 sketch of Tallassee Mico by John Trumbull.



"However trifling it may appear on the map, it is a considerable tract of country."—from a letter written by Creek leader Alexander McGillivray to Secretary of War Henry Knox.

the Washington administration aimed to end with the treaty in New York, only to provoke civil unrest and disobedience among Georgians who saw the Creek treaty as a federal land theft. From the 1790 meeting in New York to the fall of 1792, the treaty slumbered, and in spite of the presence of federal peacekeepers in the valley, crossing the Oconee became a double-dare for Georgians and Creeks alike. As for the boundary, a federal survey stalled at the Oconee Forks, while the headwaters remained under Creek dominion until the following winter.

"I hear from the Indians, respecting the inhabitants on the Oconee driving great gangs of cattle over on this side in the fork of Julia Pecka [Apalachee], and from that

in both Pensacola and New Orleans promised Creek leaders that their claim would be defended in ongoing Spanish-American talks. News of Georgia's incursion across the North Oconee reached the Ohio Valley, adversely affecting peace talks between tribal leaders and United States officials at Niagara.

Chief Brant of the Six Nations explained: "...at the rapids of the Miami [River], messengers from the Creek nations arrived there and brought authentic information of the white people having encroached upon that part of the confederacy. This intelligence at once gave a change to the face of the proceedings and, probably, was the sole cause of the abrupt termination of the negotiations for peace..."

The last military engagement over the Forks occurred in the spring of 1794, when Georgia militia were routed by Creek warriors near High Shoals on the Apalachee. By then, the balance of power in America was changing. Increased political pressure from the United States, a growing militancy in Georgia, failing Creek allies and an unwise war with the Chickasaws brought Creek leaders to surrender what they had so passionately held.

At the Treaty of Colerain in 1796, the Creek delegation aggressively sparred with both U.S. and Georgia commissioners in nearly three weeks of intense diplomacy. Once again, the Creeks prevailed on several notable fronts, but bitterly failed in their bid to retain the Beloved Forks. Witnessing the distress of the Creek representatives and understanding the significance of the moment, the U.S. commissioners pressed the issue, bluntly asking, "Is this the assent of the nation?"

The interpreter responded, "Yes. I am asked to speak the sense of the [Creek] representation, and it is this: The matter in question has been laid before them, since they have been here. It was a strange and a hard matter—a thing which they had not explained to them in New York and could not explain to the nation. It was with the utmost reluctance that they consented to give the land away; it was like pulling out their hearts, and throwing them away."

Steven Scurry

Local ecologists, environmental groups and neighbors are working to protect a large Athens-Clarke County tract that was once part of the sacred land of the Creek Nation.