



SEEDS Field Trip ♦ University of Georgia/Coweeta LTER ♦ Nov. 2-5, 2006

## FIELD TRIP REPORT

### Field Trip Overview

From November 2-5, 2006 SEEDS conducted a student field trip to the University of Georgia (UGA) and the Coweeta Long Term Ecological Research (LTER) program. Attendees included seventeen students from twelve schools across the country and Puerto Rico; two SEEDS faculty advisors; and two staff persons from the Ecological Society of America. A list of attendees can be found in Appendix A.

SEEDS field trips allow students to explore their interest in ecology by learning more about the science, exploring career options, and seeing the practical applications of ecology. Students have the opportunity to find out more about what ecologists do through hands-on experiences with professionals, to receive training in specific areas, and to build networks with students and professionals.

Many activities took place during the field trip. Participants met with a number of people from UGA's Institute of Ecology and graduate school. Participants were also given a tour of the Institute. Participants then traveled from Athens, Georgia to Otto, North Carolina to learn about the ecological research being done at the Coweeta LTER. The field trip also offered an opportunity for cultural enrichment with a stop to the Museum of the Cherokee Indian. A full field trip itinerary can be found in Appendix B and a contact list of for the host professionals in Appendix C.

Students were asked to keep journals. In addition to individual notes, rotating groups of 4-5 students were responsible for writing about each day's events, which was then edited by SEEDS staff and compiled to create this report. The sketches are also from the group reports. This report reflects the voices of the students who attended the field trip.

### Thursday, November 2nd

The field trip began with everyone's arrival to the Atlanta airport. Brian Kloeppe (Assistant Research Scientist, Site Director, and Co-Lead Principal Investigator), Greg Zausen (Research Technician), and Randy Fowler (Technology Transfer Specialist) from the Coweeta LTER were there to meet us. The charter bus took us from the airport to the Holiday Inn Express in Athens, Georgia near the campus of UGA. Everybody checked in and after relaxing just briefly we walked up the street to DePalma's Italian Cafe for dinner in downtown Athens. Luanna Prevost, SEEDS alumna and UGA graduate student, met us there for dinner. The dinner was delicious

and gave a chance for students to get to know each other. After dinner we had a brief field trip orientation back at the hotel.

### Friday, November 3rd

*Team 1: Rene Aguilera, Alex Benhumea, Jere Boudell (faculty mentor), Micki Lindeman (leader), and Fabiana Silva*

The Holiday Inn Express hallway welcomed us with a copy of USA Today and the local paper in front of each door. We all gathered in the lobby for a warm breakfast just before loading into the charter bus, which had a mildly offensive, Coca-Cola red caricature of a Native American with a nose the size of Rhode Island painted on the side (see figure). The morning was cold and the air was as tired as the SEEDS participants.



It was a short ride to the Institute of Ecology where Brian Kloeppel introduced Alan Covich, UGA Professor and current ESA President, as our first speaker. Dr. Covich gave an overview of ESA and the new website and asked us for suggestions for improving the website. He also talked about the LTER network and the importance of long term studies. He used the forests of Puerto Rico as an example – they predicted hurricanes based on data, but also found things they didn't expect. He encouraged the group to attend the upcoming ESA Annual Meeting in San Jose, California. He emphasized the importance of networking and being exposed to the current debates in ecology. Graduate school was the next topic Dr. Covich took on, and a prevailing theme reiterated by the rest of the speakers. He encouraged students to visit campuses, meet with people, shop around and apply to three to six schools. Lastly, he advised us to look at many departments because ecology is represented in many different ones.

John Gittleman, the Director of the Institute of Ecology, talked to us next. He opened by asking the group what we thought were the important topics in ecology. Dr. Gittleman narrowed down all of the students' voiced concerns of atmospheric pollution, habitat loss, and increase in atmospheric carbon dioxide, to the one cause: humans becoming the single dominant species on Earth for the first time in the planet's history. He followed with a discussion of the University of Georgia's graduate programs, focusing on their holistic approach to dealing with ecological problems. He talked about the three tiers within the Institute: education, outreach, and research. He also noted that one spends the most time, and learns the most from one's fellow grad students and peers.

By this time in the morning, most people in the group had woken up, and Curtis Byrd, the Executive Director of the Peach State Louis Stokes Alliance for Minority Participation, was standing before us. His positive energy filled the room while he discussed the application process for graduate schools. He emphasized early preparation, developing rapport with professors to get solid recommendation letters, taking advantage of opportunities like internships and co-authoring publications. He also made a point to mention the importance of applying to multiple graduate

schools and the multiple departments within each school. He advised beginning the process in the spring semester of one's junior year by gathering letters, applications, and crafting your personal statement. In the summer, take the GRE and get a summer research experience, especially at an institution you're interested in. Other advice included maintaining at least a 3.0, knowing your deadlines, checking out the demographics of an institution, applying electronically, applying as early as possible, attending career fairs and dressing to impress, asking for fee waivers if you need them, and developing skills to demonstrate you're the best candidate.

Amy Rosemond, an aquatic ecologist at the Institute, took the floor next. She also provided her advice about graduate school. She told us that peer learning is the key in graduate school. Find a good advisor, but you're in the trenches with your fellow students. She talked about Eco-Reach, a program that brings ecology to schools in the surrounding areas and provides an opportunity for her students to give back to the community. She also told us to be persistent about contacting graduate professors during the application process. She shared the inspirational story of her life journey. She has been successful in balancing her career, graduate education, and having a family. Her path was not a direct one either. After finishing her bachelor's degree she worked as a graphic illustrator and then in a genetics lab before running into an old advisor who encouraged her to attend graduate school. She started in an administrative position at UGA, but when a tenure track position opened up down the road, she had the confidence that she could do it. She told us that if you have the passion, the rest will follow.

Next was Jessica Anderson, a representative of the Outreach and Diversity Office of UGA's graduate school and a graduate student herself. We discussed how diversity encompasses not only ethnic background, but also gender, research interests, and life experiences. The take home message was "Get paid, don't pay for grad school." We all took note of the funding options she discussed including Graduate Recruitment Opportunities (GRO) assistantships and the Summer Undergraduate Research Program (SURP). Ms. Anderson also recommended UGA's Graduate Visitation Day – a two-and-a-half day opportunity to learn more about graduate programs with housing and meals provided.

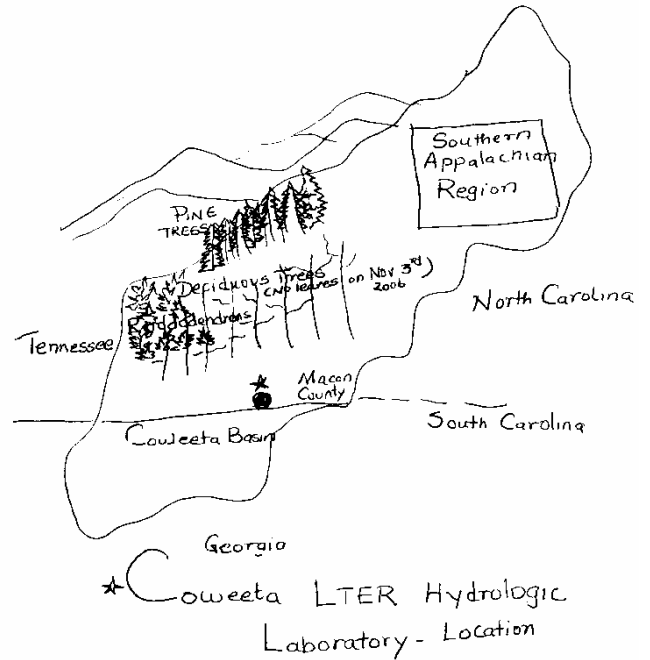
Luanna Prevost discussed the importance of looking at departments in-depth because the best fit may not be in the most obvious department. She said that UGA is particularly good because there is collaboration between the departments. She also suggested looking at not only your committee's requirements, but courses you may need for your professional development. Also, look at the facilities. For example, UGA has a research station in Costa Rica which has allowed her to do research there and may provide her the opportunity to teach ecology there. She also told us not be discouraged if we don't know what we want to do, because you can take a broad path and narrow it down. She told us the time management is the key in graduate school and to talk to people to know your committee deadlines. Lastly, she told us to have a positive outlook, but accept the challenges that will come.

After that we all chased John Kominoski (UGA PhD Candidate) around the UGA Institute of Ecology buildings and labs on an all too brief tour. Then we returned promptly to our mildly offensive charter bus and began our way to Ryan's Buffet in Commerce, Georgia for lunch. After lunch we returned to our bus and began making our way to the Coweeta LTER.

*Team 2: Alexa Azure, Serge Farinas, Claudia Ramirez (leader), Kristen Reynolds, LeAnn Rutledge, and Sashi Sabaratnam (faculty mentor)*

Once we quickly settled in at Coweeta, we had an orientation there to learn more about the LTER. Jim Vose, the Project Leader of the Coweeta LTER, began with a talk - "Coweeta Hydrological Laboratory Southern Research Station." Dr. Vose has been the Project Leader at this site for the past eight years.

The site was set aside as the Coweeta Experimental Forest in 1934. Measurements of rainfall, streamflow, climate, and forest growth began almost immediately. During the Great Depression the Civilian Conservation Corps and 2000 men under their direction built the original laboratory buildings, roads, climatic stations, and stream measurement devices. In 1948, the site was renamed Coweeta Hydrologic Laboratory. The Laboratory is a National Science Foundation LTER site and a USDA Forest Service facility - a research work unit in their research division.



The Southern Appalachians have been shaped by humans. Heavy degradation by poor logging practices and high precipitation rates (70-90 inches/year) resulted in poor water quality. Forest hydrologic research began out of concerns about soil erosion and flooding due to poor land use at the time, debates about management, and recognition of the need for a formal research entity. The original goal of the facility was to provide science for science-based management. Their current mission is "To evaluate, explain, and predict how water, soil, and forest resources respond to ecosystem management practices, natural disturbances, and the atmospheric environment; and to identify practices which mitigate impacts on these watershed resources."

#### Chronology of Coweeta

1934	established
1936-39	period of standardization
1940s – 1960s	land use demonstrations
1940s – late 1960s	streamflow/water yield studies
1968 – present	ecosystem studies

Infrastructure of the research station includes roads, building, vegetation plots, weirs (measure streamflow every five minutes), and climate stations. Coweeta has a 70+ year record of climatology and a 30+ year record of atmospheric chemistry. The Coweeta LTER program provides a highly accurate long term record of environmental data. This allows for the detection

of long-term trends and also helps put shorter studies into perspective. It is also the key in developing a better understanding of forest watersheds and how to manage them wisely. The contemporary research program is highly collaborative between the Forest Service and LTER. For the last 30 or 40 years they've been trying to measure everything – litterfall, forest floor decomposition, soil leaching, canopy consumption, etc. Dr. Vose also talked about staff, facilities and infrastructure, knowledge delivery, and education and training at Coweeta. Brian Kloeppe talked next, highlighting some more history. Established in 1980, Coweeta was one of the first LTER sites. He gave an overview of the current research which advances scientific understanding of spatial, temporal, and decision-making components of land use and land use change in the Southern Appalachian mountains in the last 30 years. This includes biophysical heterogeneity and disturbance and land use legacies. Dr. Kloeppe talked about opportunities at Coweeta. These include summer 2007 paid internships at Coweeta for a SEEDS field trip participant. This internship is a paid position with free housing. There are also long-term opportunities for projects at Coweeta through the graduate school at UGA. Lastly, he gave an overview of the field trip:

- Stop 1           Watershed 7 – long term recovery after forest harvest  
                  Watershed 3 – impact and recovery of agricultural practices
- Stop 2           Watershed 18 – sapflow dynamics and scaling  
                  Watershed 18 – soil respiration measurement and scaling
- Stop 3           Lunch  
                  Trail head toward Pickens Nose

The orientation at the Conference Center ended with everyone gathered around the model of the LTER, with Dr. Vose explaining the layout of the watersheds and research sites. There was also discussion about prioritizing research projects and when to stop collecting data.

After the presentation we had a barbecue social at the Coweeta Residence. We had the opportunity to meet some of Coweeta's industrious scientists at this event. Coweeta researchers and staff included Barry Clinton, Jim Deal, Sue Deal, Katherine Elliott, Chelcy Ford, John Ford, Randy Fowler, Jim Gruhala, Carol Harper, Brian Kloeppe, Jennifer Knoepp, Chuck Marshall, Neal Muldoon, Jim Vose, and Greg Zausen. We all learned a lot and had a great time.

Saturday, November 4th

*Team 3: Jere Boudell (faculty mentor), Rita Cáceres, Nhan Lam (leader), Nancy Sandoval, and Jessica Wheeler*

The morning broke cold and sunny as we awoke early. After eating breakfast and making lunch we headed out to our first stop.

This stop was watershed number seven, an area of 180 acres which was clear-cut in the mid 1970s. First Dr. Vose explained how the weir worked. The weir is used

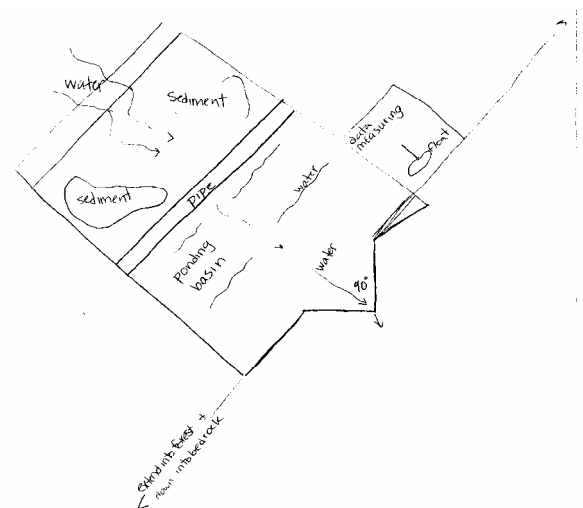


Figure 1. Weir monitoring Watershed 7

to measure streamflow. The water flows through a ninety-degree notch and the rate of flow is determined by the distance between the float and the bottom of the “V.” The weir was designed to direct all of the watershed’s water through the notch (see figure 1). The ponding basin is cleaned out yearly and the sediments and their chemical composition are recorded. They also look to see what happened to the vegetation, microbes, and insects after disturbance.

A study was performed to determine the twenty-year response to clear-cutting and cable logging. One aspect of the study was to see what happened to the stream flow after a clear-cut. The streamflow increased 26 cm and was 28 percent above what would have been expected without cutting. By the mid 1980s the streamflow had returned to a similar rate as the control. The early successional species began to reinhabit the area, allowing the water flow to return to “normal.” One reason that the response in Coweta was better than in the Hubbard Brook Experimental Forest in New Hampshire was because these ecosystems are adapted to having hurricanes. Surprisingly, in the mid 1990s, the streamflow increased again and they hypothesize that this was due to competition and self-thinning, a density-dependent process.

Another portion of the study focused on increased nitrogen and nitrates in the stream after the clear-cut was performed. Nitrogen is important in the ecosystem because it leaches, is toxic when found in too high of a quantity in the water, and is important for plant growth. Directly after the logging the nitrate level spiked and never quite returned to “normal” though it has decreased. In the early 1990s the nitrate level rose again and this is hypothesized to have been caused by one or more of the following:

- Black locus fixes nitrogen. When the species composition shifted, there was a decrease in the uptake of nitrogen
- Species shifts causing rapid self-thinning and increased composition altered the leaf-litter quality.
- Logging materials were slow to decompose and as they began to do so they released a large quantity of nitrogen.

The third study dealt with plans for better logging roads. 85 percent of the sediments come from the roads not the clear-cutting itself. All types of unpaved roads have the same effect. The idea was to disconnect the roads from the streams so that the water could be directed via road-dips into the forest to be filtered.

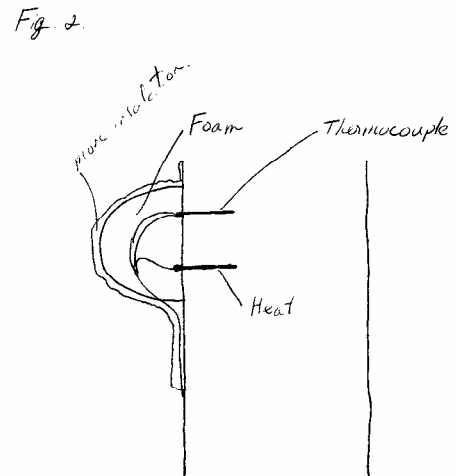
In watershed number three, an area was allowed to be used for agriculture. The land was used for growing corn and ranching. They lost many of the horizons and by the seventh year the land was completely useless. The vista was referred to as a “moonscape” to describe the effect that the improper farming techniques had on the land. The yearly soil loss after clearing the land for agriculture rose to 215 tons per year, 13 years after it was cleared. All of the erodable soil was lost. In the 1950s the area was reforested, but because of the extreme loss of soil, it will be a long time before the area recovers. Because of the poor farming practices used on a steep slope near a riparian area, the effect was great. In this area they showed us three rain gauges – one which measured amount, one measured intensity and timing, and one measured chemistry.

We then visited an area that had been impacted by the Hemlock Woolly Adelgid. They set up twelve plots, four controls with no hemlock, eight with hemlock, in four of which they girdled

the hemlocks. They girdled the hemlocks to see what would happen to light, litter fall, and secondary productivity, among other things. The two basic goals for the research were to monitor the severity and spread of infestations at Coweeta and examine the long-term consequences of hemlock loss from riparian zones.

Several different methods were being looked at in the control of the adelgid. One was using the ladybird beetle as a biocontrol. This method was hard to use as the beetles are small, expensive, and not reproducing. The other method used involved injecting a nicotine compound into the xylem of the hemlocks. Once the adelgids ingest the nicotine, their eating declines. Some small areas are kept under tighter control to protect a pool of genetic diversity. Other studies are being done on hybridizing the hemlock.

In watershed seventeen the transpiration of large trees was measured (see figure 2). They wanted to determine if the water flow is species-specific – different use between hardwood and pine. There are more pine plantations being planted, and pines use more water. They measured water use differences between pine and hardwood using innovative equipment which utilizes hypodermic needles to measure temperature differences as water moves past the two thermocouples. The temperature differences would determine that rate of flow. Technology has really changed the way science is done. The observations that used to be made in the field are now made on the computer.



The next stop brought us uphill to the soil respiration station. They wanted to see the difference of CO<sub>2</sub> sequestration and transpiration in natural systems versus pine plantations. They sealed off ten chambers in cycles of nine minutes. Each sealed-off chamber had oxygen pumped into it and the level of CO<sub>2</sub> being given off by that area was measured. Each section was allowed to be natural with leaf litter and plants sprouting in them. They check the levels from their computer to make sure there are no leaks or other problems.

We finished off the morning with a walk on the “Pickens Nose” trailhead to an outlook over the Coweeta Basin, where we ate our delicious picnic lunches.

We would like to thank all the fantastic people whose cool was just so cool. *Ecooligically yours.*

*Team 4: Kallia Cooper, Whitney Gayle, Charissa Jones (leader), Brenda Nieto, and Sashi Sabaratnam (faculty mentor)*

This afternoon we went to the Museum of the Cherokee Indian in Cherokee, North Carolina. Our tour guide was Eddie Swimmer also known as Running Wolf, a name given to him by his grandmother. The museum was founded in 1948, with a limited collection of artifacts dating back to the beginnings of human life in the Southern Appalachian Mountains. In 1958, a fire

destroyed the log structure of the museum. Fortunately, the museum's collections were in winter storage during the fire and remained untouched. Mr. Swimmer explained that the Cherokee are unique being that they do not live on a reservation, but they own their land, referred to as a boundary. The Cherokee still speak their native language consisting of 86 symbols.

We began our tour with the story of the Cherokee creation legend. In the beginning, all the animals lived in the sky, however, it was becoming overpopulated. A brave water beetle volunteered to go to down to the sea and looked for land. He dove into the sea, brought up a patch a mud, and became an island. Thunder set a tree on fire and animals attempted to capture the fire. Eventually, a spider wove a small basket with her thread, went up to the tree, placed a burning piece of coal, and brought fire for the rest of the world. Hence, the Cherokee are called the "fire-people".

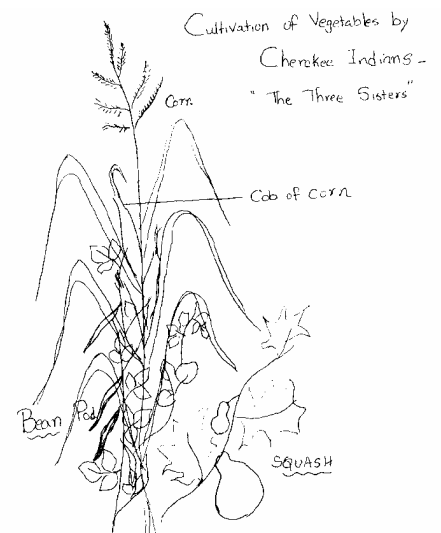
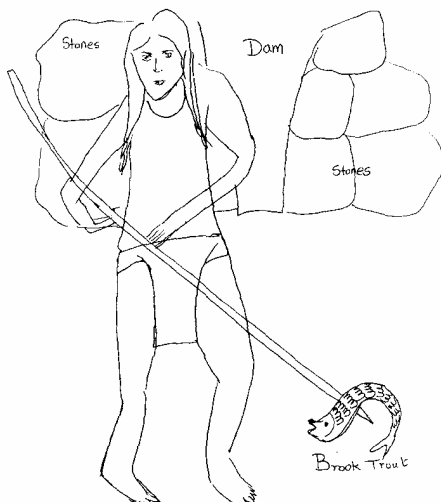
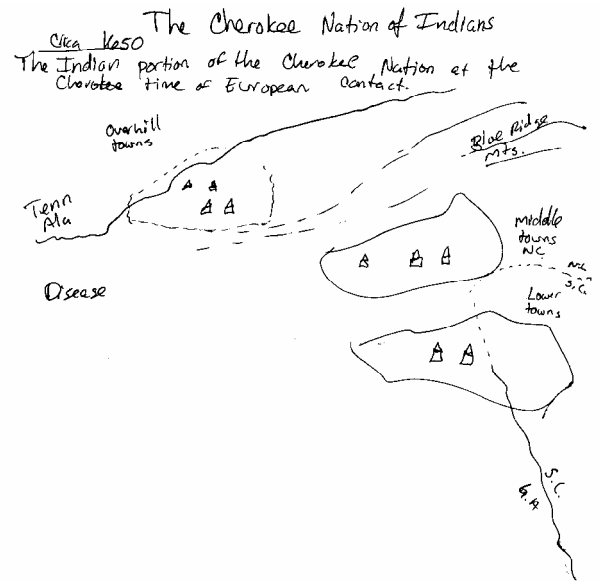
The history of the Native Americans includes the Paleo, Archaic, Woodland, and Mississippian eras. In the Paleo period (11,000 B.C. through 8,000 B.C.) they were the first people in North America. They were hunters and gatherers who hunted mastodons living in lean shelters, and made tools that survive today. Knapping was a skill of making stone into useful shapes to be used for shredding, scraping, and engraving.

The Archaic-Indian life period was a time when they ate vegetation and they were able to create a surplus of food without having to cultivate crops. As a result, they took on a more sedentary

lifestyle and newfound leisure time allowed for sturdier-made tools. They used simple methods for fishing like using crushed walnut bark as a toxin to catch fish. This toxin stunned the nervous system and caused the fish to float to the top of the stream. Another method of fishing used fish traps made of stone called weirs. They were used by Cherokee Indians in a V-shaped dam across the river where the stones came together. Nets and traps were attached to trap fish. This kind of ancient fish trap may be seen today in the Little Tennessee River near Cowee, in Mason County, North

Carolina.

The Woodland and Mississippian eras began around 1,000 B.C. and were times of environmental adaptation. They began to



manufacture sturdier pottery since they traveled less. Crop cultivation evolved. Corn combined with beans and squash became known as the “three sisters.” Cherokee Indians refined their planting, cultivating, and harvesting techniques. They used a method called “hilling”- piling dirt around the base of the corn stalk to provide drainage. They had an ingenious method of pest control; they hung gourd squash around their gardens to attract Purple Martins which nested in the gourds, consumed insects, and kept crows and blackbirds away.

The Green Corn Festival was the most important Southeastern Indian celebration. Traditionally, they had several corn festivals and later they compressed into one festival, the Green Corn Festival. It was a time for celebration and an opportunity to maintain “balance” and make alliances and trade among clans and with other villages. Gathering usually lasted all night and often resulted in marriages, since leaders knew war was less likely if the tribes were related. Games like stickball or “Anesta” were associated with war and had strong political overtones. Matches were highly competitive and resulted in injuries and even death. A good stickball player resulted in good war skills because the game dealt with speed, agility, strategy, and mobility.

Later, European colonialism brought many changes to the land. The most significant changes were diseases like small pox, measles, and malaria. Being in the Appalachians protected them from the worst of the diseases and English settlement until of the advent of the American Revolution.

Starting in the 1820’s the Five Civilized tribes of the Southeast were removed from their homelands and pushed West. The American ways of life began to dominate, enforcing their political infrastructure. However, the Cherokee Indian way of life lives on through modern medicine because more than 75% medicinal plants known to grow in the U.S. are found in the Southern Appalachian Mountains.

On our way back to Coweeta we stopped in Silva, North Carolina for dinner at Karen’s Restaurant.

### Sunday, November 5th

The field trip wrapped up with breakfast on Sunday morning, evaluations, and a group photo before we loaded up onto the bus one last time for the trip back to the Atlanta airport.

### Evaluation Summary

Students’ evaluations confirmed that it was a really positive experience for the participants. Students were asked which aspects of the field trip increased their interest and/or understanding of ecology. Students rated “seeing what ecologists do” as most important. Students were also asked to rate their understanding of various aspects of ecology before and after the field trip to see where they developed the most as a result of the field trip. As a result of their participation,

students' "awareness of the diverse students and professionals interested in ecology" increased the most.

There were many solid suggestions for improvement, including: having a formal ice breaker, providing time for individual sightseeing or exploring, having planned discussion times, and giving the students the opportunity to take some measurements at the study sites. Lastly, students indicated a high likelihood of sharing their experience with other students at their school, friends, and family.

Some specific comments:

- "Talking to people who have already gone through graduate school really gave purpose to why I wanted to attain my PhD."
- "Being able to speak to knowledgeable people about career options and the necessary pathways to get there really helped me orient myself and be able to construct a practical plan for my future."
- "I had never seen these sorts of technologies in action, and it was an eye-opener to see how much of an integration there is between ecology and other sciences."
- "When you come from a small college, where you are the only science-based program on campus, it is sometimes hard to view real scientists as people. It helps to meet them and hear what others are interested in and get ideas that come from a different perspective."
- "I was able to see where the field work is done and get a sense of the environment that Coweeta scientists work in. By seeing the sites and having the experiments explained I was also able to see how scientists from many different areas of expertise all collaborate together."
- "I enjoyed learning about forest ecology and long-term research. I understand how doing long-term research is important to understanding ecological processes."
- "I finally spent time with students with similar interests, interesting backgrounds, and different research experience. It felt cool to speak the same language, we knew the same things, we had the same concerns. I liked it a lot."
- "Understanding how important it is to start applying for graduate school really opened up my eyes to the whole process."
- "Seeing the kinds of projects that ecologists handle on a daily basis greatly enhanced my understanding and enthusiasm for ecology."
- "The researchers discussed ecology but also other areas of life that tie into what you want out of life and out of a career. They were extremely personable and offered advice that I will keep for future decisions."
- "I got to meet people that are interested in the same things as me and to find out what they want (and did) with their life and research, which different areas and schools they came from, and their view on the different campuses. From the ecologists, their work and passions and all the different opportunities that are available. It's hard to point to one thing that was the most inspiring, because the whole trip was full of so much information."
- "I didn't understand higher education and graduate school and this field trip helped my understanding."

## Appendix A

### FIELD TRIP PARTICIPANTS

<b>Student Name</b>	<b>Institution</b>	<b>Email</b>
Rene Aguilera	University of New Mexico	aguilera@unm.edu
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## Appendix B

### FIELD TRIP ITINERARY

#### Thursday, November 2nd

Early Afternoon: Arrivals at Hartsfield-Jackson Atlanta International Airport

~3:00 PM: Motor coach transportation from airport to Athens, GA

5:30 PM: Arrival at the Holiday Inn Express (<http://www.hi-athens.com>) in Athens

6:30 - 8:30 PM: Dinner in downtown Athens at DePalma's Restaurant

8:30 PM: Orientation at the Holiday Inn Express

#### Friday, November 3rd

7:00 - 8:00 AM: Continental breakfast at the Holiday Inn Express  
(guests may include John Gittleman, Alan Covich, Cathy Pringle, Mark Bradford, and Amy Rosemond from the Institute of Ecology)

8:00 AM: Motor coach transportation to the University of Georgia Institute of Ecology  
<http://www.uga.edu/ecology/>

8:30 - 10:00 AM: Presentations at the Institute of Ecology seminar room  
John Gittleman - Director, Institute of Ecology  
Alan Covich - President, Ecological Society of America  
Angela Jewell or Jessica Anderson - Graduate School Outreach and Diversity  
Luanna Prevost - UGA Graduate Student and SEEDS Alumna

10:00 - 10:30 AM: Tour of the Institute of Ecology facilities  
(guides may include John Kominoski, Sonia Hernandez-Divers, and Ethell Vereen)

11:00 AM: Motor coach transportation to Commerce, GA

11:30 AM - 12:30 PM: Lunch in Commerce, GA at Ryan's Restaurant

12:30 - 2:00 PM: Motor coach transportation to Coweeta near Otto, NC  
<http://coweeta.ecology.uga.edu/>

Friday, November 3rd (continued)

2:00 - 3:00 PM: Arrival and organization at Coweeta Residence and Coweeta House

3:00 PM: Introduction at Coweeta Conference Center by Brian Kloeppe and Jim Vose

4:00 - 7:00 PM: Social and Barbecue dinner with Coweeta scientists and staff at Willy's Bar-B-Que in Franklin, NC

Saturday, November 4th

7:00 - 8:30 AM: Continental breakfast at Coweeta Residence; prepare bag lunches for field trip

8:30 AM: Coweeta Field Trip

Tour Guides: Brian Kloeppe, Jim Vose, and Randy Fowler

watershed 7 - forest harvesting experiments at Coweeta

watershed 3 - agricultural and sedimentation experiments at Coweeta

watershed 18 - carbon and water flux experiments

watershed 27 (527 site) - terrestrial gradient research site

trail head to Pickens Nose outlook - lunch site if weather permits

2:30 - 3:30 PM: Motor coach transportation to the Museum of the Cherokee Indian  
<http://www.cherokeemuseum.org/>

3:30 - 5:00 PM: Visiting the Museum of the Cherokee Indian

6:00 - 8:00 PM: Dinner in Sylva, NC at Karen's Restaurant

8:00 - 9:00 PM: Return via motor coach to Coweeta

Sunday, November 5th

7:00 - 8:30 AM: Continental breakfast at Coweeta Residence; prepare bag lunches for trip home

8:30 - 10:00 AM: Evaluations and wrap up sessions at Coweeta Residence

10:00 AM - 12:30 PM: Motor coach transportation to Atlanta International Airport

Afternoon: Departing flights to home locations

## Appendix C

### UGA/COWEETA STAFF AND FACULTY

**Jessica P. Anderson**

*Graduate Student*  
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**Curtis D. Byrd**

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