

Walker Valley REFLECTIONS



The newsletter of Great Smoky Mountains Institute at Tremont • Fall 2004

Every year Tremont is blessed with the arrival of a fresh batch of people who join our staff for ten weeks during our summer season. These individuals bring much experience and devote a lot of hard work, and our summer programs would simply not be a success without them. This year we had a record number of native Tennesseans—nearly half of our summer staff. We also had representatives on staff from such far-ranging places as Kentucky, Georgia, New York and Washington. Thanks to all of them for their hard work and dedication (see names of summer staff on the staff list on page 12.) The following are some reflections, special moments and parting thoughts.



Finding A Second Home

I come from a place where the mountains are high and covered with snow year-round, where the trees are evergreen, where the oceans bring their rains and the salt air. Washington is the place that will remain in my mind and heart as my roots. It is where my parents taught me to love

the outdoors and all of the things that live there, where I hiked my first trails and sailed my first seas. However, I continue to bring with me the values and skills I learned wherever I go, including to the Great Smoky Mountains and Tremont where I spent the summer this year.

When I first moved to the Southeast a year ago, I did not know what to expect or

if I would even like it. Since then, I have come to love these mountains and the people that inhabit them, however different they may be from those I knew previously. Many times I have been asked how eastern and western mountains compare. The answer is, they don't. There are some places that seem familiar and similar, but there is a

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Reflections of



SUMMER

The Tremont Experience

What's so special about Tremont?

by Jaimie Matzko

There are a lot of things that make camp at Tremont special. Whether participating in a nature club, backpacking, swimming in the Middle Prong or learning to collect data like a real scientist, campers get what I like to call the “Tremont experience”—when the campers truly feel the awe and wonder of nature. Certainly living inside the Great Smoky Mountains National Park for several days is incredible. There is so much to discover and learn in these mountains and at the end of camp that most kids don’t want to leave! I talked to the staff here at Tremont to get some amazing stories of the “Tremont experiences” they witnessed this summer.

Mary Silver and *Eagle Brosi* recalled a time during Expedition camp when the campers were tracking for black bears. They noticed a pile of bear scat loaded with berries along the trail. As they continued, they found many more—each pile of scat looked fresher than the previous. The group moved silently along the trail, peering into the woods to catch a glimpse of the black bear. Mary was proud of the patience and observation skills the group had demonstrated. Truly they would always remember that moment.

Mickey Larkins and *Amanda Davis* have a great memory of taking a group of Expedition campers to the Road Prong Trail to study forest types. One of the campers saw a salamander scurry under a rock along the trail. They wanted to examine the salamander to identify it, but when they lifted the rock, the salamander wasn’t there. What they did find was a mass of salamander eggs. As they gathered around to get a better look at the eggs, they noticed some of the larvae in the eggs were moving around. Needless to say, this was an amazing discovery!

Another experience Amanda and I remember was during a Discovery Camp nature club. The group was enjoying a game called camouflage when Amanda and another camper stumbled upon a fawn lying among the leaf litter. She got the rest of the group together and we quietly approached to watch the fawn from a safe distance. It sat perfectly still and its spots made it hard to

see—a great example of camouflage!

Adam Barnes and *Michelle Prysby* had a lot of great experiences during the first Field Ecology Camp, but one truly stands out as the most memorable. This group got the opportunity to work with the bear researchers. When they got to the trap line, they waited in anticipation as the research team tranquilized the bear. They then took all sorts of measurements of the bear. One camper, Sarah wrote: “The interesting thing about going bear trapping is that you get up close and personal with the bear. I have never been actually near a live bear except in a bear cage.” Not only was this a great experience to gain a new respect for these animals, but also to collect important data that helps the black bears in the national park.

These are a very few of many summer memories that stood out, but there is so much more to summer camp. Camp memories at Tremont also include lasting friendships, camp-outs, hiking, looking for salamanders, swimming in the river, playing capture the flag, and of course, the campfires. I am sure of one thing as the end of summer approaches: we will never forget the connections that we’ve made, not only with nature but also with each other.

Digging into the Past

If you stopped by Tremont this summer, you may have noticed a new addition to our facility—tent platforms. These platforms were constructed behind the Activity Center, and some are in the same areas as the Camp Margaret Townsend tent platforms were. You may have seen college students and professors sorting through old nails, pieces of pottery, and other artifacts, relaxing in their tents, or playing music at the Friendship Circle. These folks were part of a collaboration involving the Archaeology Research Laboratory at the University of Tennessee, Great Smoky Mountains National Park, the Eastern Band of Cherokee Indians, and the Great Smoky Mountains Heritage Center. Together, these organizations are producing the Smoky Mountain Archaeology Field School, a residential field camp for undergraduate and graduate students. For six weeks this summer, the students lived in tents at Tremont and ate in the dining hall. They learned the necessary skills for becoming professional archaeologists by conducting archaeological studies in and around the national park. Some of this year’s studies included work at the John Oliver cabin in Cades Cove, on the Cherokee reservation in North Carolina, and in Townsend. The field school also led archaeology programs for Naturalist Week and Field Ecology Adventure Camp, allowing Tremont participants to learn more about the amazing history and of this area. The Field Ecology campers even helped with shovel tests in Cades Cove, digging holes and sifting through material to help determine where a more thorough dig should occur.

The Smoky Mountain Archaeology Field School will be a permanent addition to Tremont, expanding to eight weeks next year. The tent platforms, too, are here to stay, and we look forward to using them with our adult and school programs. The luxury tents (think large safari-style) with cots allow for a unique Tremont experience that can draw us even closer to nature.

ATTENTION TEACHERS!

Would you like to come to Tremont for FREE?

Teachers who have attended a workshop at Tremont are able to waive their fee when they return with their school group, along with earning a discounted rate for all of their students and chaperones! Workshops which apply to receive this discount are:

- | | |
|--|----------------------|
| • Teacher Escape Weekend | October 8-10 |
| • Fall Naturalist Weekend | October 22-24 |
| • Geology of the Smokies | November 5-7 |
| • Tracking and Nature Observation | November 5-7 |
| • Environmental Education and the Arts | February 25-27, 2005 |
| • Spring Awakenings Naturalist Weekend | April 15-17, 2005 |

For more information or to reserve a spot call (865) 448-6709 or write jennifer@gsmiit.org



Teens Do Care!

To build or not to build?

by Jen Martin

On July 14, 2004, I left the Great Smoky Mountains Institute at Tremont for a seven-day backpacking trip with my co-leader, Crawford Paylor, and nine teenagers. We were headed for a remote area of the Great Smoky Mountains National Park. This trip was very significant. The 43-mile area we hiked is associated with a controversial issue involving a proposed road going right through the middle of it.

Throughout our trip we had several discussions about the economical and environmental pros and cons of such a road. We talked about the 1943 agreement between Swain County, North Carolina, the Tennessee Valley Authority and the National Park System: a road along the northern shore of Fontana Lake in exchange for the 44,000 acres that were transferred by the residents to the park. The proposed North Shore Road is intended to replace a previously existing road that was flooded from the making of the reservoir. The proposed road would most likely cause an increase in tourism in Swain County, one of the poorest counties in the area. However, the road's route will cut through the middle of the largest roadless areas of land in the eastern United States. In addition, construction would expose the acidic Anakeesta rock, allowing the possibility of it leaching into streams and killing aquatic life, which has

already been a proven occurrence from existing roads in the Smoky Mountains. The true need for a road has also been debated, since a road on the southern shore of Fontana Lake was built. A \$40 million settlement has been offered to the residents of Swain County, which is considerably less than the projected \$150 million it would cost to complete the North Shore Road, therefore posing a reduced burden for taxpayers.

Experiencing the backcountry for a week in this wilderness area allowed us to understand the dimensions of this matter. Each of our campers asked to write letters in order to voice their opinions and state their feelings about such a strong issue. Although only a few letters could fit in this newsletter due to space, all of them have been sent to Gale Norton, the Secretary of the Interior, by the campers' request. I would like to thank Craig Lester, Kristen Davis, Jon Speer, Michael White, Alan Brown, Jacob Bittles, Cristin McKinney, Emma Caverly and Nicole White for their passion about this issue and for being such fabulous young people!

Dear Gale Norton,

This week I went on a seven day backpacking trip through the Great Smoky Mountains that changed my life. I am 15

years old from Dallas, Texas. While my family is from this area, this trip was my first true glimpse of the Smoky Mountains. A group of campers from Tremont and I started the trip at the Twentymile Ranger Station and ended on the Road to Nowhere, a 43 mile trail. Thinking back on the trip- the bear I saw, the mountains I climbed, and the friends I made, I have now become against the proposed road in this area. My parents hiked through these same mountains when they first got married, and my grandmother while she was at the University of Tennessee. The memories they have, and stories they tell are amazing. I hope that my memories about these mountain ranges will be as interesting one day. Before coming to the Smoky Mountains I was never really a "nature" person, but as the days passed I fell in love with how peaceful it is up here and how I felt as I pushed my boundaries. I plan to do this next year, and the year after that. This week gave me the chance to find myself. That's why I think the road should not be built through the Smoky Mountains. So that my children and their children can have a place where they can escape into themselves. A place without the negative things in the world today. The Smoky Mountains changed my life for the better and I hope the proposed road is never built because I believe that would be a change for the worse.

*Sincerely,
Kristen Davis, 15, Dallas, TX*

Dear Secretary of the Interior,

My name is Christin McKinney and I am 17 years old. This letter is concerning the controversy over whether or not to build/finish the Road to Nowhere. On July 14, I embarked on a seven-day, six night backpacking trip with eight other peers and two counselors. We were a part of the Great

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an issue
of Walker Valley
Reflections...**

**To continue receiving this newsletter
and our 2005 catalog of
programs, please return the form
on page 12.**

Teens Do Care!

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Smoky Mountains Institute at Tremont. This is the fourth year I have participated in this camp and this year's route was the most affecting. Our counselors informed us that this year's route could become a road. Therefore as we hiked the many trails, I took into consideration of what it could become.

If a road were built there, so many beautiful things would be taken away. As our days passed, we were taken to a whole new universe that was as innocent as a new born. We saw so much life out there that would die if the road were built. Though I am against building the road, I understand where the citizens of Bryson City are coming from. Yet the number of people that must come through to equal the amount spent on the road is mind-boggling. It appears to make more sense to take the \$40 million offered in placement of the road.

The Smokies are a very special and majestic place. What makes them stick out among others is the amount of roadless terrain. There are people with passions to venture out and discover the secrets of the Smokies, and if this road is built a part of their undiscovered secrets is lost. As one of these passionate people, I hope that I will still be able to discover those deep secrets of the Great Smoky Mountains.

Sincerely,

Christin McKinney, 17, Camben, SC



Oh...THAT'S Why They Call it a Rain Forest!

A little rain didn't phase this group

by Michael Matzko

We have all heard the expression about roaches being the only thing left after a nuclear/mega-volcanic catastrophe. I would like to amend that saying and add children to the list. My goodness, they might be the toughest most resilient creatures on earth. Now, I know some of you parents out there might be chuckling right now thinking "not my kid," but

what I'm telling you it is true. Kids are tougher than anything I have come across in my life experiences. Oh sure, they whine about many things, but don't mistake that for weakness. If put in a situation, such as the four days of rain we experienced on our Wilderness Adventure backpacking trip, they prove time and time again their ability to overcome.

I have had about five years of hardcore backpacking experience, mostly in the wilderness of Yellowstone National Park. The wilderness out west is a little bigger and a little more unforgiving; it can snow any month of the year. I'm here to tell you the week of June 21st thru June 25th here in the Great smoky National Park was the most trying of *all* my trips. The teens, Mary Silver (co-leader) and I set out from Tremont early Tuesday morning headed for Lake Fontana in Western North Carolina. We arrived at the marina just in

time for the beginning of what was to be a week of rain (six inches). We paddled across the lake and up what used to be Eagle creek. Did I mention it was raining? We finally made it to our first campsite around 6 p.m. with a brief stoppage of the deluge. The next morning we awake to a light drizzle which really never seemed to fully stop until—wait... it didn't stop. To complicate matters, one of our campers had fallen ill with nausea and an upset stomach. This is when these kids proved their mettle to Mary and myself. That day was to be an elevation climb of about 2000 feet in less than a mile, difficult in perfect conditions with a daypack, let alone in the rain with a 35+ pound backpack. So these kids begin there ascent of Sassafra Gap with heavy packs, wet feet and rain pouring on down. Oh yeah, I almost forgot about the poor kid with nausea at the end of the line. It took about

As the Earth Rotates

A late spring, summer weather synopsis

My goodness, seasons pass so quickly here in Walker Valley. I was so looking forward to the summer, and here we are fast approaching fall. The month of May was unusually dry, and in comparison to last May it might as well have been a desert. The month of June was extremely wet—so wet, in fact, that I was beginning to grow gills. July has pretty much stayed close to form—hot and humid. As the earth rotates, we will keep you up-to-date here in Walker Valley.

—Michael Matzko

	May	June	July
<i>Average high</i>	81° F	84° F	87° F
<i>Average low</i>	57° F	64° F	64° F
<i>Total rain</i>	4.7 in.	8.8 in.	6.4 in.

Re-Evaluating Tremont

New methods of gathering information

three and a half hours to make that climb. When our sick camper finally made it to the top, the rest of the group really drew strength from his heroic climb. At that point, I thought that this kid was going to need to be picked up and taken back to Tremont. I gave him some Gatorade and a little lunch, and—would you believe it? He was fine an hour later! My respect and admiration for these kids really began to grow. By day three, everything we had brought with us was wet—tent, tarp, sleeping bag, backpack. And what were these kids doing throughout all of this rain? Hiking and playing pattycake. I spent the last night cursing the rain from my leaking tent in my wet sleeping bag, thinking how if I were on this trip by myself I would have bailed two days ago. The last day started as all of the others had...with *rain*.

Thankfully, we only had two miles of hiking to make it to Forge creek road and our van for the trip back to Tremont.

I will never forget those four days spent in a temperate rainforest with the toughest, most resilient children on earth. So parents, next time the kids are whining about something trivial, remind them about the Wilderness Adventure Camp when it never stopped raining. They can do *anything* when put to the test.

I would like to personally thank my fearless co-leader Mary, and of course the hikers: Emily, Rachel, Jonathan, Ryan, Emily, Anna, Cody, David, Corey, and the pattycake king, Zach. You all made what could have been a disaster the most memorable backpacking experience of my life. *You rock!*

I remember the first evaluation I ever filled out. It was the end of my sixth grade year, the last day of school, and our teacher asked us to fill out a form describing how we felt about her class. As any sixth grader worth his Trapper Keeper would, I didn't view this as an opportunity to have my opinions heard, but rather as one last obstacle between me and the end of school pizza/yearbook signing party. I sped through the form, filled in all the "average" marks, wrote no additional comments, and turned it in without ever looking back.

How many of us out there share this mentality towards evaluations? They are yet one more form for us to fill out, a necessary evil usually reserved as an outlet for our feelings when the service or facilities or product does not meet our satisfaction. Anyone who has attended a program at Tremont, or any other environmental education center, has probably been asked to fill out an evaluation. As in any industry, we are always looking for ways to improve and build on our programs.

In recent years, many people in the environmental education field have been trying to find a way to take evaluation to the next level. The challenge is finding methods to not only gather information on customer satisfaction, but to determine if our programs have a lasting impact on the

participants. Whether the goal is to educate participants, provide new opportunities, or simply get people out there to have fun, evaluating the impact of these things can be tricky business.

Tremont is lucky enough to be at the beginning stages of an evaluation overhaul. This fall, we will be working with a team of PhD. students from Yale who will help us

with our existing evaluation strategy and work with us to plan new methods of gathering information. Our goals are lofty: trying to not only get feedback on our program

fundamentals, but finding ways to determine the short and long term effects a trip to Tremont has on participants. What does a student remember about Tremont one week after they go home? What about one year later? Ten years?

All of the staff at Tremont are excited about the opportunity to work with the folks from Yale: Marc, Nicole, and Bob, as well as finding answers to the questions we have about our programs. I'm sure the process will be a long one, and it will be a while before we see the results of our work, but it will be exciting to see what those results are. And hopefully, we can get those sixth graders to think a little harder about their answers than I did.

—Adam Barnes



COOKS CORNER *by Lori Flanagan*



Cajun Pickles

With garden harvesting time here, I know several people who have discovered that they have overplanted. Tomatoes turn into salsa, corn into corn relish and, of course, cucumbers into pickles. Once you've pickled all those cucumbers, here's a great way to change them into a different-tasting pickle. By all means, buying them won't make them any less tasty, and might save you some trouble if you're like me and don't have the time or patience for canning.

1 gallon of pickles, drained of juice (if bought, Vlassic is the best that I have found; they stay crisp)
3 cinnamon sticks broken into small pieces
6 cups sugar
1 tbs red pepper (more if you like things very spicy)
5 cloves garlic chopped fine

Put aside pickles for now.

Mix cinnamon, sugar, red pepper, and garlic in bowl. In a container that you can seal and turn over without leaking, put some of the dry mixture on bottom, then put a layer of pickles. Continue this process of layering until complete.

Place in an out-of-the-way location and do not refrigerate. Once a day, turn container over. On the fifth day your Cajun pickles are ready and now need refrigeration. Enjoy!

Reflections of Summer

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different feel to the Appalachian Mountains and the Smokies because of the people that have left their history and the culture that has survived. For hundreds of years people have thrived in the hills and hollows, making their living by farming, hunting, fishing, providing for their own needs and creating their own entertainment. After meeting and talking with many long-time residents of the mountains, I have gained a great appreciation for the traditional music, dancing, and methods of living that are still being utilized. Along many hikes in the park, remnants of old homesteads, chimneys, and stoves can be seen, and I can imagine the people living there who saw the same sights I am seeing. This kind of heritage is not found in many of the western mountains, as the environment there is often too harsh for all but a few hardy species to inhabit.

While hiking in the West, the goal was often to reach a certain overlook or peak where the view was the reward for one's effort. Since I have lived here, however, I have taken closer looks at many trees, flowers, mosses, lichens, and rocks. They have their own value that does not come from rocky peaks and pinnacles. It has been a

valuable lesson to learn, as often the greatest things to see are on the ground where feet are stomping and tiny creatures are moving. Because of the temperate rainforest habitat in the Smokies, many life forms exist here that do not in other areas. The native species of trees, flowers, bushes, and creatures are very different from those that I knew in Washington. It has been exciting to live in such a place, to learn about the things that are growing around me, and simply experience what was an unfamiliar setting becoming a second home.

Living in a national park for ten weeks is something that cannot be matched by many things, and I hope that my influence will help lead others to help preserve and protect more wild places like the Smokies to be discovered by generations to come. These eastern mountains have comforted me and given me a home, and they will always have my care in return. Although my heart may always remain in my old stomping grounds of Mt. Rainier, the Cascades, and the Pacific Ocean, I know my second home is here in the Southern Appalachians, where I will live for at least a few more years and will continue to visit for a lifetime.

—by Amanda Davis

June Showers Bring...

Spending an entire summer at Tremont has been awesome in many ways, and one of the best parts has been the daily chance to really get to know the area. Above all, the weather this summer has made us all realize where we are—in the middle of an honest-to-goodness temperate rainforest. If April showers bring May flowers, our June downpours brought us something even cooler—fungus!

It seems like every time I was in the woods this summer, whether with a Naturalist Week hike or a Discovery Camp nature club, somebody got excited about fungus. And once one person in a group starts noticing those tiny mushrooms hiding in the trailside moss or that weird yellow slime on the log we're climbing over, it doesn't take long before everybody is searching for (and finding) bigger, uglier, and crazier representatives of the fungus world.

Why do we all find fungi so fascinating? For some people, it's the great variety of shapes, sizes, and colors that makes fungus-hunting exciting. Right here in Walker Valley, there live fungi resembling the bell end of a trumpet, fungi that stick out of tree trunks like shelves, fungi shaped like minia-

ture corals, and blobby fungi with no apparent structure at all. There are mushrooms smaller than a thumbnail and mushrooms with caps larger than my whole hand. This summer, I've seen a mushroom in every color except blue. The diversity is amazing when you first start noticing fungi, and the more you see, the more staggering it gets.

To some people, the lifestyles of fungi can be even more interesting than their appearances. Because they have no chlorophyll to produce energy from sunlight and no mouths to chew up insects or peanut butter sandwiches, fungi make a living by absorbing nutrients from whatever they are growing on. They can be saprophytes (decomposers) or parasites, and some fungi even live in a symbiotic relationship with flowering plants such as oak trees, in which they help the plant's roots absorb minerals from the soil in return for a gift of sugars produced by the plant's green leaves.

Of course, the mushroom you might see beside the trail can't do all this work of taking in food by itself! In fact, it is only a small part of the entire fungus that produced it. The most important part of a fungus can be found underground or inside the rotten log it's living on. For most fungi, this consists of thousands of tiny threads called hyphae,

Arachnophilia

I've always been a big fan of the "creepy-crawlies," especially the ones with eight legs. As a kid, I would catch insects just to feed them to the spiders I was temporarily keeping in jars. I would anticipate the insect's entanglement, then stare wide-eyed, waiting for the fatal bite. I realize that most people think this pastime sounds *absolutely* insane, but watching spiders was just one of the many ways I connected with nature growing up. This summer I enjoyed sharing my fascination for spiders with students. I'm always surprised by the reactions people initially have to spiders. One of my favorite tricks is to do the unspeakable act of picking up a spider in my bare, unprotected hand. Students stare in disbelief when I don't automatically get bitten. This isn't to encourage carelessness, but to demonstrate that some things are scary just because they're misunderstood. Repulsion melts into wonder when students witness a female wolf spider carrying all her offspring on her abdomen, an orb-weaver vibrating in her web so fast that she becomes invisible to birds, or a nursery-web spider standing guard near her cluster of spiderlings. One group, while observing the interactions of several spiders and insects in a terrarium, exclaimed that it was better than television! In that moment of awe, those students made a new connection with the natural world. I wrote the following poem with the hopes that readers might be inspired to take a closer look at, and make new connections with, some of the little creatures which are often taken for granted.

—Athena Anderson,
2004 George W. Fry Chair
for Science Education

which do the actual work of gathering food and will only send up a mushroom or other glamorous fruiting body to produce spores when conditions are just right. The hyphae of a single fungus can spread out to cover a surprisingly wide area, often enough to make it a bigger organism than many of the trees growing around it. Most of the time, if you see several mushrooms of the same species in one area, you can be pretty sure that they're all connected to the same hard-working, under-appreciated system of hyphae somewhere below your feet.

The next time you're in the woods, even if you never think about hyphae again, look around for

Late Night Asphalt Ecology

Mother's Devotion

Bug on a cabbage leaf,
so near to its doom!
A poke with my pencil
sends it into her loom.
Her body fuzz-covered
and beaded with dew,
she awaits the arrival
of unwary food.
An ancient masterpiece,
Eight-legged death.
Simplicity, elegance,
in her delicate breadth.
With a devious grin
I anticipate the attack,
as the bug brushes silk
I hold my breath back.
But she balks!
What is this?
The bug goes free?!
She shudders, not pounces,
When it contacts her knee.
A touch again, and she moves away,
No concern for the insect,
to my dismay.
Only then do I see
where her true cares reside,
with the white sphere of silk
which her abdomen hides.
No interest in food,
she settles to embrace
her developing young
in their fragile egg case.
Here she will remain
'til her spiderlings leave,
attempting to further her selfish genes.
—Athena Anderson

fungus anyway. You can still appreciate its many colors and forms, and admire the way it just pops right up from places where you never knew it lived. People settling this area more than a hundred years ago did, and the names they gave some fungi—witches' butter, dead man's fingers, devil's snuffbox—reflect their feelings about it. But in another light, fungus is pretty amazing. A mushroom pushing its way through the forest floor the evening after a rainstorm is tangible evidence of the tremendous amount of life happening around us all the time.

—Mary Silver

The story I wish to tell is one of childlike curiosity and learning. Driving down Tremont Road at night is a trip that can take some people a few short minutes—those who can anticipate the curves and choose whether or not to abide by the speed limit. We think only of our destination, our attention focused on how long the journey will take and what music we want to hear along the way. For some of us, though, the trip (or a trip down any road) can take a bit longer, especially at night.

The night time is rarely thought of as a time to really explore the intricacies of the life that calls the Smokies home, but I tell you this: take your time and you will see the activities of many lives that have come to adapt to and enjoy the things (ironically) that a twenty-four foot wide slab of asphalt has to offer them.

Coming out of its nearby den for the night, the White-footed mouse (*Peromyscus leucopus*) frequents the road more than we may imagine. Foraging on the roads after rains for insects and worms that might be out for their own night time activities, they find fresh food sources to feed their tiny little metabolisms. It's easier to find things crawling around on a flat top rather than in a forest of grasses, and at the same time they have a greater awareness of any predators that may be out there. While driving down the road, these tiny mice can be seen darting to the edges as one turns a corner. Halting for a moment before fleeing, they drum their front feet rapidly in excitement to alert any other small prey, and then they dart. Small bright tufts of fur skitter across the pavement; the cars headlights reflect off of their white bellies, and they look like minuscule cotton-balls zipping off the contrast of black tar.

When the afternoon has not wet the pavement with rain, these small mammals still frequent the roadside beds to forage for dried food sources: nuts, seeds and berries. These are stored in internal cheek pouches to be later hoarded in nearby trees or abandoned birds' nests for winter. Using the road in a few ways, the white-footed mouse is an interesting character to observe, even if only for a few seconds as they scamper off the road. And as frightening as a speeding car might appear to

them, there are some creatures that intimidate the mice even more.

With the lack of cover and the intensity of the sun in the summer months the blacktop can become unbearable. We can feel the heat through our shoes and the warmth radiating back up at us again; the summer head assaults us not only from above, but below as well. While we may curse the heat source that is tar in the summer, other creatures have come to bask in the opportunity.

The Southern Copperhead (*Agkistradon contortix*) finds the road to be most helpful in its day-to-day activities.

During the warmer summer months, the copperhead balances its body temperature by becoming more and more nocturnal. After a days' sleep, this cold blooded predator searches for two different types of heat sources: one to heat its body, and the other to catch the attention of the heat sensitive pits found between their mouths and eyes. Copperheads and other snakes love Tremont Road. Easily meandering across the warm tar; they travel between their hiding places to the feeding ground of the forest. But alas, creatures such as the white-footed mouse frequent this area as well. Copperheads, though, are more sophisticated at chasing down their food.

They lie in wait. Roadsides are perfect for this because most animals use the same trails time and again and become predictable enough for ambush. Older copperheads may rely on their wit, but younger ones have been observed luring other animals nearby, mimicking the movement of grubs and small insects with the tips of their tails.

These are only two of the many characters I have found on our small road, but these activities happen everywhere, not only in a national park. Driving through suburbs, I spot evidence of the previous evening's activities of a fox. We just have to keep our eyes open as to what happens on the pavements we take for granted. Slow down, share the road with these creatures, and learn from them. Keep yourself safe, but at the same time remember that they have as much right to be there as you.

—Mihkel Allpere
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Reflections of Summer

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A Rewarding Challenge

This summer was a huge success for me in so many ways. I watched as kids truly engaging in the natural world mentally and physically, becoming connected with nature, and redefining what it means to them. Sometimes it was just simple things, and other times there were profound experiences and connections, things like campers getting up early to jump in the cold river; seeing kids hold a sixteen inch hellbender up to their faces; taking kids to see some of the park's old growth forests and then having five kids wrap their arms around a big old tulip poplar; hiking eight miles with a group on their first solo hike; taking a group to see old buildings and imagining old ways of life; watching city kids expanding their boundaries with new experiences and even starting to tolerate some insects, and sharing the uniqueness of a beautiful area or the mystery and

magic of a waterfall.

One big success this summer happened with a boy who had trouble adjusting to being at Tremont. When he got here, he refused to enjoy himself and he didn't invest much effort into anything. Most noticeable about this individual was that he seldom smiled and was always looking at the ground. When we were on an all-day hike he refused to walk or hike anything faster than a crawl. He even tried to bargain that he would walk faster if a counselor bought him a Coke, let him call his mom, and then let him go home. Well, lets just say that hike took a little longer than planned. I think his first noticeable engagement took place during a scavenger hunt. Campers were divided into groups of four and then went to different places around Tremont to answer riddles, questions, and accomplish tasks before they could move on. One part of the hunt involved find a "prehistoric" salamander egg, laid by a "prehistoric" giant salamander which had just been seen heading toward the river. (The egg was a water-

melon that they all got to eat at the end.) The final activity involved the kids building a boat out of random materials that we gave them at each spot, and then we tested the boats for sea-worthiness. The campers showed a wonderful display of teamwork, and that particular reluctant camper was seen several times running and smiling. By the end of his stay with us he was smiling and getting along with the other kids, and we even got him to run a few more times. For the staff, it was an amazing turnaround, and I know there was a considerable difference in his attitude, even if he didn't realize it. Besides a huge change in one individual, I also think of all the love for nature that was nurtured, how understanding natural processes and wilderness will not soon be forgotten, and how, for some, their nature experiences have begun and found roots. Maybe those roots will be grounded in Tremont and the Smokies.

As for me, I will miss working, playing, and laughing, seeing the kids connect, and sharing my love for the great outdoors.

—Joshua Melino, Summer Staff

Transitioning to the Real World

The end of the summer draws near, and I am reluctant to leave the Smokies. Something about the constant, but ever-changing, environment makes me feel comfortable and happy, and I can see myself as a part of the whole, an active participant in the course of nature. Perhaps it is because for the other nine months of the year I am surrounded by pavement, papers, meetings, and often, the frustrating apathy of others towards the natural world. My body and mind enjoy the break in routine from college life and my responsibilities during the year. While it is an enjoyable change of pace being in the Smokies for the summer, working at Tremont has definitely become more than a vacation from the real world for me. Within the soothing environment it provides, my desires to affect the lives of others so that they too may experience such happiness and wonder when surrounded by wilderness are fulfilled. When at Tremont, even my state of mind and emotional well-being are improved, and I feel more complete and more at peace with myself than ever before. While the reasons for Tremont's dramatic effect on me cannot be completely explained, it is clear that working at Tremont for the past four summers has

had an incredible impact on me and affected my life more than I ever imagined. Through the challenges and rewards of every day camp life, the respect and admiration among co-workers, and the unique opportunities to view nature that have been presented to me, I feel that Tremont has helped shape my life and aided my development into an adult, as well as a naturalist. Several life lessons have become more apparent to me over the summers:

Patience As always when teaching children, this virtue is a requirement. Working at Tremont has shown me the importance and effectiveness of being patient in any condition—especially when living and working in an outdoor environment.

Respect This is an idea used throughout the summer at Tremont and it is a key element in the success of the camps. However, the most impressive practice of respect to me exists among staff members. As an 18 year-old recently graduated from high school, working as a research assistant at Tremont was my first real job. It was very intimidating to be surrounded by individuals who knew so much about the Smokies, but after the first day I was made to feel completely at ease. Every staff person treated me as a valuable, capable person, and their actions led to the growth of mutual respect. My appreciation for their kindness has

only strengthened over the years, and I have an immense admiration for them.

Confidence Through the respect and patience shown to me as a summer employee, I became more and more confident in my abilities to be successful in carrying out Tremont's mission of "connecting people and nature." The faith that my superiors and coworkers had in me to do my job well transferred to me, and I too began to feel that I was an upcoming naturalist. This feeling followed me to college and enabled me to be successful in other areas of my life.

As the summer is ending and my senior year of college is looming before me, the real world is getting much too close. Before I realize it, graduation will be upon me, and I will no longer be a student. While I have enjoyed evading the adult world and am sad to see an end to my summers home from college being spent in the Smokies, I know that I am not really leaving Tremont behind. As a result of the experiences and memories I have gained, it has helped mold me into the person that I am today. Now, the passion for environmental education, respect for all living things, and the desire to conserve and protect wilderness areas have become an innate part of me that will never be forgotten.

—Erin Henegar

Birds of a Feather

Studying the birds of the Great Smoky Mountains National Park

by Charlie Muise



On July 30, we concluded the fifth season of bird banding at Tremont. We follow a protocol called Monitoring Avian Productivity and Survivorship (or MAPS for short), which calls for banding only during the nesting season. We opened nets eight days for six hours per day.

People often ask me why a bird which has been caught in a net, held by people, put in a bag, poked, prodded, had feathers pulled, etc., would ever get caught in a net again. Don't they ever learn? Well, yes they do. Of the 17 birds we recaptured, only one was caught with the same net in which it was originally captured. One year, a single bird was captured four times in four different nets! Apparently, they remember the location of a bad experience and stay away. But the nets work because they are nearly invisible to the birds, so there is no way for a bird to avoid a net in a different location.

It seems every year we have one bird that is quite interesting. This year it was a partially albino Louisiana Waterthrush. (Unlike mammals, which are all or none, birds can be partially albino).

This year we caught fewer birds than average, but more than last year (which was our worst so far.) Once again, Louisiana Waterthrush was the most caught species, representing 33 of our 73 captures, or 45% of the birds in our nets.

Two species seem to have rebounded from a decline we noted the last two years. Louisiana Waterthrushes accounted for over 50% of our birds in 2000, 40% in 2001, and just 24% in 2002. But last year, a flood in early May caused a drastic decline in the number of this stream-bank-nesting species. This year they were back up to 45% of the birds we captured—especially good news since we were very concerned when we did not catch a single one for the first two banding days. In fact, we went from a record low of 17 last year, to

nearly doubling it with 33 this year.

Red-eyed Vireos, considered by many ornithologists to be the most numerous neo-tropical migrant in the Americas, was not caught in our nets much in the last two



Charlie Muise

years, and the number of birds heard singing also seemed to be low. Though the number of individuals heard singing still seemed low this season, we did catch six this year.

Many other researchers receive information or samples from us. One researcher in Los Angeles is studying DNA to determine where birds nesting in certain areas of the US spend the winter. The DNA is obtained from tail feathers which we and other banding stations send him. We also take samples of any external parasites found on birds for all five years, and for part of that time we took small blood samples to look for blood-borne parasites. In addition, this year we took fecal samples, which are possi-

bly the easiest samples to obtain. Some come off of the banding table, some off of my shirt, some out of the bags we transport birds in...you get the picture. In addition to birds, sometimes other creatures get stuck in the nets. Most are large insects such as bees, beetles and butterflies. As part of a new effort to study dragonflies in the Smokies, we are now noting the dragonflies we see during the day, and collecting those that get stuck in the bird nets.

Statistics aside, this was an extremely successful year. Science is only part of our reason for banding. Teaching scientists of the future is equally important, and this year I was able to do much more training. Last year was the first year I ran this station, which was set up by Paul Super. Having never managed a station before, I felt a need to be very hands-on, which may have been good for the birds and the data, but wasn't very good for the training. This year I was able to focus more on the training. This made for more challenge, more fun, and more education for the cadre of volunteers and science interns, nearly all of whom are teens. And it was a strong team. For the four years I've been at Tremont, we've been lucky to have one teen who had the experience and motivation to be a real leader. Though we really missed Bonnie Jo Voorhis, who helped open the station, and was Assistant Station Manager last year, we were all impressed with how quickly Amanda Heinrich was able to fill in the role of teen mentor. Our youngest volunteer, Lindsay Crawford, was back this year, and she is now removing birds from nets on her own. Lindsay is learning fast, and we hope she will continue for a few more years. Many thanks to her mom Audrey, who provides transportation and is a wonderful photographer.

The following is a list of what we caught. New birds refers to birds we caught and applied a band to. Unbanded means we caught a bird, but did not apply a band for some reason. Recapture means a bird that was caught already wearing a band.

<i>Species</i>	<i>New birds</i>	<i>unbanded</i>	<i>recaptures</i>	<i>total</i>
Louisiana Waterthrush	23	1	9	33=45%
Red-eyed Vireo	6	1	3	10=14%
Carolina Wren	3	0	3	6=8%
Indigo Bunting	2	1	1	4
Wood Thrush	4	0	0	4
Acadian Flycatcher	3	0	0	3
American Goldfinch	2	0	1	3
Northern Cardinal	1	1	1	3
Ruby-throated Hummingbird	0	2	0	2
Black-and-white Warbler	2	0	0	2

Worm-eating Warbler, Eastern Phoebe and Northern Parula accounted for one capture each.

From the Science Room

Teacher Workshops, Adventure Camps, bird banding, BioBlitzes, and more

by Michelle Prysby, Citizen Science Director

Summer has been a whirlwind for Citizen Science programs at Tremont. Between our Smoky Mountain Science Teacher Workshop, our Field Ecology Adventure Camps, activities with three student research assistants and a teacher intern, visiting scientists, bird banding and salamander monitoring volunteers, and ATBI BioBlitzes, we've been keeping pretty busy! There are several images that will stay in my mind, representing to me of some of the great connections between people and nature that happened this summer. I won't forget the dedicated bunch of Discover Life in America volunteers bent over tables in the Science Room, intently sketching, keying, and labeling lichens as part of the ATBI Lichen Quest. Or our visiting scientists, always clad in black wet-suits and leaving trails of water wherever they went, chatting with our summer campers about the hellbenders they found right in the Middle Prong. Or a 13-year-old girl patiently learning to remove birds from mist nets, then successfully removing her first one on her own, to the cheers and accolades of her mom, other volunteers, and Tremont staff. Or Field Ecology Adventure campers chasing down dragonflies with butterfly nets and Super-Soakers, helping to develop an inventory and reference collection of these fascinating predators. Or the young Discovery Campers, mouths agape as they sit, entranced with images of giant insects crawling across the screen of our video microscope. Working with the Summer Research Assistants was a highlight, and I thank them and our volunteers for helping make the summer a success. Read on to learn about their own impressions of the summer.

—Michelle Prysby, Citizen Science Director

Once when I was little, I found an awesome looking beetle that I later identified as a rhinoceros beetle. It was so awesome that I kept it in my room for several weeks until it began to smell. I have learned quite a bit since then, but I still get that same sense of excitement from finding a radical new insect.

That is probably why some of my

favorite experiences were had while working on the Dung Beetle project. In this project, we hike along trails, usually trails that are used by horses. The horses, as you can imagine, leave behind enough dung to provide a substantial habitat for beetles. Two of the trails we hiked on while searching



Charlie Muise

for dung were the Middle Prong trail and the Schoolhouse Gap trail. In all the time on the trail in between dung piles, however, I got to know my co-workers (and now, friends) much better. Whoever designed this project seems to have had my interests in mind exactly, because there is not much that I enjoy more than hiking on great trails, talking to great people, and looking for awesome beetles.

—Cliff McCold

Though I had many memorable experiences this year, from checking salamander bags to visiting Spruce Flats Falls, one of my favorite memories was the day hike we took up to Mount LeConte. We took a 13-mile hike to assist with the All Taxa Biodiversity Inventory. In particular, we were hunting for dung beetles, fungi, and insects living in leaf litter. I had never been to Mount LeConte before, and the weath-

er was perfect for hiking. We went up the Boulevard Trail and down the Alum Cave Bluffs trail, stopping along the way whenever we saw fungi or piles of dung.

We had our own adventure looking for an ATBI plot off the trail; we also collected leaf litter for the leaf litter blitz occurring at Sugarlands. The views from the top were beautiful, and we could see over the tops of the clouds that hung over the mountains. Though sore and tired at the end of the trail, I definitely felt a sense of accomplishment from all that I had done that day.

—Amy Jendrek

This was my third summer as a Research Assistant at Tremont. Each summer has held a wide variety of experiences and memories. This summer, one of my greatest memories was getting to visit Purchase Knob. As soon as I arrived at Purchase Knob, I was in awe. The training building sits on top of a knob, which is surrounded by wide open fields and mountains in the background. There are literally mountains on all sides! I still talk about how beautiful it is up there.

Cliff, Michelle and I went to “the Purchase,” located on the North Carolina side of the Smokies, to learn about ozone monitoring. Tremont has an ozone garden which contains three plant species prone to ozone damage. We learned how to identify them and the different types of damages that can occur on these plants. I will never forget the beauty of Purchase Knob or how to identify ozone damage on plants.

—Amanda Heinrich



Looking Ahead

Join us on one of these exciting fall programs

October

Fall Adult Backpacking Trip: Grassy Balds Galore Hike

October 15-17, 2004

A grassy meadow on top of a mountain called Russell Field wasn't what you'd expected in the Smoky Mountains. In fact, you weren't sure you could even reach the top of this mountain—but it wasn't so hard after all. And here you are, experiencing mountain "balds" firsthand—natural wonders that continue to leave scientists stumped in regards to their origins. Several miles of the renowned Appalachian Trail lie ahead as well as Spence Field, one of the Park's loveliest spots. A sea of trees wearing fall colors stretches in every direction for as far as the eye can see. Downhill, at the campsite beside a roaring stream, a hot supper and the glowing embers of a campfire await at the end of another day's adventure. *Cost: \$205*

Autumn Brilliance Photo Workshop

October 15-18, 2004

What better place to improve your photography skills than in the Smokies during the peak of fall leaf color? Join us for the weekend as photographer Willard Clay shares the splendors of fall in the Smokies. Field sessions and lectures will cover the use of light, composition, landscape photography, close-ups, and how to find the "right" picture. An emphasis will be placed on digital photography, but all formats are welcome. The program will combine natural history interpretation with photographic technique and is designed for intermediate to professional photographers. Program lasts from Friday

supper to Monday mid-morning. This workshop fills quickly, so register early! *Cost: \$450*

Women's Backpacking Trip: Ace Gap Hike

October 22-24, 2004

Spending a weekend in the mountains visiting a waterfall and an old Indian trail with other women sounded intriguing the first time you heard of the idea. Now that you're walking a gentle ridgeline through a pine-oak forest yourself, Ace Gap seems just the right hike for such an adventure. Is the legend you heard from your guide, an experienced Tremont naturalist, true? The one about a female ghost who haunts Ace Gap, making it a trouble spot—for men only—because of a wrong done to her a century before? No matter. For now, it seems the perfect place for a community of women alone to inhabit, to rest their spirits and enjoy one another's company, share stories and make new friends. *Cost: \$205*

rocks exposed within the Park, and geologic structures like folds and faults that illustrate its complex tectonic history. We'll relate the rocks to the biological world and environmental concerns in the park. Program lasts from Friday supper to Sunday lunch. *Cost: \$175.* One hour of graduate credit is available for an additional fee.

Nature Observation and Tracking

November 5-7, 2004

Spend a weekend developing your skills to recognize and interpret the clues left behind by the wide variety of creatures that live in the Smoky Mountains. Explore animal sign, stalking and movement techniques, and nature awareness and observation skills. Much of the time will be spent exploring the park and interpreting what we find under the instruction of tracking expert Wanda DeWard. Program lasts from Friday supper to Sunday lunch. *Cost: \$190.* One hour of graduate credit is available for an additional fee.

November

Geology of the Smokies

November 5-7, 2004

Join us for a journey back in geologic time. Led by Scott Southworth of the U.S. Geological Survey in Reston, VA, this exciting weekend adventure consists of informal talks and hikes throughout Great Smoky Mountains National Park. We will investigate the Park's different geologic aspects as well as discuss the billion year old history of the rocks of the Smokies, with emphasis on the processes that are unique to this region. We will discuss and examine igneous, sedimentary, and metamorphic

Tremont Work Day

November 13, 8 a.m.-4:30 p.m.

Roll up your sleeves and come join us for our annual work day. We will paint, clean, do trail work, and have a variety of projects to "spruce up" Tremont's site and facilities. Call or e-mail us to register or for more information.

No Child Left Inside

We still have room for school groups for the 2003-2004 school year. If you know of a teacher or principal that would be interested in getting their school involved in a Tremont program, please have them contact us!

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