



Walker Valley  
**REFLECTIONS**

The newsletter of Great Smoky Mountains Institute at Tremont • Winter 2002-2003



*M*ay the peace of the hills and the comfort of the valleys reach your heart this holiday season. The Tremont staff thanks you for another great year and looks forward to seeing you in the new one!

# Tremont Happenings

*News and gossip from greater Walker Valley*

## Transitions

• Both **Crawford Paylor** and **Bethany Hanna** have decided to move on at the end of this year. They each have plans to enroll in graduate school in the fall and want to take some time off to prepare. They have both been Teacher/Naturalists for over a year and have contributed a great deal to Tremont. We wish them the very best.

• **Artem Khatsko** returned to Russia at the end of November. It was a joy to have Artem as our international work-study intern. Our registrar **Sara Crum** is also moving on. Thanks, Sara, Artem, Bethany and Crawford for all you have contributed!

We want to welcome **Katie Farmer** who will begin as Teacher Naturalists in January. A welcome also to **Julie Brown** who began as registrar in November. Something strange is going on, as both of these women happen to be moving here from North Carolina. Katie has been working as an educator at Crowder District Park in Wake County, NC, and Julie has been in Asheville but traveling over the mountain many weekends because of her love for the Smokies. Welcome!

## A New Look

Thanks to the Great Smoky Mountains Natural History (NHA) and the talents of Lisa Horstman, we are excited about a new design for our newsletter and other Tremont publications. As we develop our vision for the future of Tremont we want to hold on to those things that have been at the core of what we are, while challenging ourselves to look to the future as we build upon our past. With that in mind we spoke with Steve Kemp at NHA about the need to give our publications a fresh look and establish a consistency in design and professionalism throughout the printed materials we produce. We have been proud of the positive comments we receive and the quality of articles in *Walker Valley Reflections*. We hope that you agree that our

new design brings this publication to an even higher standard. As our 2003 program brochure, school group trip planner and other materials are produced we hope to provide a consistency in look and quality that mirror the quality of the programs we offer.



## School Scheduling 2003-2004

We still have a few openings on our calendar for 2003 January through May. If you are interested in finding out what we have open please contact our registrar, Julie Brown, at [mail@gsmit.org](mailto:mail@gsmit.org).

Beginning in January, we will be mailing scheduling information for the 2003-2004 school year. Be on the lookout and be ready with preferred dates.

## Alcoa Foundation Scholarships and More

The grant from Alcoa Foundation that we received last year continues through 2003.

\$125,000 will be available to us in 2003 to provide scholarships, enhance our science education initiative, help us in evaluating our effectiveness and support our plans to create a new facility.

The benefits that this grant has provided to us this year have been very significant providing a huge jump for our science program with equipment and funding for research assistants, and providing almost four times more in scholarships in 2002 than in previous years.

If you have students who won't be able to come to Tremont without financial assistance, please contact us to learn how to apply for those funds. Don't let financial matters keep any of your students from experiencing the beauty and magic of these mountains.

## Passenger Pigeon Painting

Most of you are aware of the plight of the passenger pigeon. This bird once darkened the skies in such numbers over the Smokies that no one would have guessed it could become extinct. In the park archives is a mounted specimen,

which is the only remaining reminder of this bird. Friends President Gary Wade has suggested that the Passenger Pigeon is a symbol to those who want to support resource education efforts like those at Tremont to assure that we build hope with future generations so that they may not make the same mistakes of the past. Judge Wade contacted renowned artist Robert Tino who has produced a beautiful painting of a passenger pigeon on a blooming crab apple branch. We are ordering copies of this print to be used to recognize donors and have plans to sell them to generate funds to support Tremont and our future.

## Tremont Master Plan

For those of you who have been following our master plan efforts, you should know that we have finished the first part of the planning process. Conceptual plans are complete and we now have some wonderful presentation boards in our office describing our vision for "undeveloping" Tremont. Our next step is to complete an environmental assessment and a public input process to further refine alternatives for our site. At the same time we are working with the Friends of the Smokies and park partners to determine strategies for generating the necessary funds to complete this dream. We will keep you posted as plans develop further.

## Get the Tremont Connection

Do you know that you are only a mouse click away from the latest happening in the Great Smoky Mountains and at Tremont? Since March of this year, Tremont has published a weekly e-newsletter full of interesting and amazing information. Sign-up for the e-newsletter at our website [www.gsmit.org](http://www.gsmit.org). It only takes a few minutes and after that you can sit back and wait for the latest reports on blooming wildflowers, upcoming programs, natural history information, bugling elk, science happenings, and much, much more. This is not a listserve so the only correspondence you will receive will be directly from Tremont. As one program participant put it "I look forward to receiving your e-mail newsletter, it's the highlight of my day!" So be in the know; join our e-newsletter list today!



Tremont file photo

## A Day in the Life of a Disillusioned Naturalist

*Generation Y-Z gap*

by *Bethany Hannah*

Some days I feel like I can change the world. Some days, well, I feel as if I may not even be a part of it. I graduated from college about a year and a half ago and because of my age, I am sometimes considered to be part of the younger generation. However, it seems there is a technological rift the size of the Grand Canyon between myself and many of the students who come to Tremont's residential school programs.

For example, I was teaching a lesson one morning called Explorations. As part of this lesson students build shelters, often one of their favorite activities. During this activity, students collect dead and downed wood, leaves and other forest materials to use in building small temporary shelters. I set the scene and laid a question in front of the group of eager 6th graders, "You have been stranded in the woods for the night and there are a few things necessary for survival...any ideas as to what one of these might be?" (I was thinking food, water, *shelter*.) I called on a girl whose hand was raised quite quickly, "A cell phone," she replied in all honesty. Argh, not what I had in mind.

There have been other cases of frustration as well. I wish I could recount

the number of times I have been threatened to be sued by a middle schooler (or maybe I don't). Often when students consider that they could possibly fall and get hurt, they vocalize

these threats. However, this suit would not be on account of any negligence on my part. At one of these times, I asked the 6th grade boy who delivered the latest threat—"Where did you hear this?" He replied, "On television."

I've also been surprised to hear from a 5th grader that she has been learning

responsibility by caring for her virtual pet. How can one learn responsibility when there are no real life consequences to face if she forgets to feed her internet pet for a week? I believe it may be creations like these that lead children to think life can be replaced artificially. For example, upon seeing a salamander that was missing a tail, one girl suggested buying the salamander a new tail at Walmart.

These are the times when I feel disillusioned. What kind of a childhood do these kids have and how will it manifest in their adult lives? Sometimes it seems that the average American is becoming removed from the simple processes of living. Some children don't even realize that food has a history before the grocery store, that potatoes are grown in the ground or that cattle must be fed and slaughtered in order for them to have a hamburger. Are we entrusting the stewardship of the earth to these cell phone wielding, internet-savvy kids?

These are also the times when I realize that today, more than at any point in history, is the time when organizations like Tremont are so important. The fact of that matter is that this younger generation will be voting in about 8 years and will be making decisions that affect the rest of the population. Tremont's mission is to connect people and nature, to teach this younger generation about the diversity of life, the value of wild places, and the necessity of their stewardship.

It warmed my heart to hear one student say, "All the activities we did really helped me have a greater respect for the natural world. I'm convinced that we need to protect what we have and that by doing so we will not only help the environment, but ourselves, as well."

*I wish I could recount the number of times I have been threatened to be sued by a middle schooler.*

Another student that attended one of our school programs said, "When I was at Tremont, I learned there are more important things than TV and video games. I didn't even remember about TV until the last day."

These are the days that make all the difference.

# Making Connections

*Should the Great Smoky Mountains be Teacher of the Year?*

by **Karen White**

At Tremont, children learn more than just new facts about plants and animals. They are encouraged to explore and discover what's around them. First and foremost, they learn to have an appreciation for the natural world by experiencing the Smoky Mountains. Sometimes, the best way to teach is to just simply act as a guide, not an authority lecturing the students on facts. Most teachers would agree that as far as learning about science, direct involvement and a hands-on approach are far superior to traditional classroom learning. Whenever I'm helping kids turn over rocks to look for salamanders or digging around looking for insects, I know this method really works. I can tell by the excitement on their faces and the interest and enthusiasm that they show me that they are learning. Sometimes I let nature speak for itself when I instruct students just to sit quietly. It's amazing how much they learn just by looking and listening.

In doing these activities, kids at Tremont are learning to appreciate the Smoky Mountains. If they can learn to love nature, they will naturally want to learn

more about it. With a love for nature and a good knowledge base, the next step will hopefully be conservation and preservation of the resource. New research shows that kids will learn to appreciate nature better at a young age if they don't have complicated environmental problems piled onto their shoulders. A better way for them to gain this appreciation seems to be repeated positive exposures to nature. Any problems presented to them should be simple ones that they can actually be involved with and see the results of. An example would be cleaning up trash from a local stream. As they grow older, bigger problems can be introduced and they will be much more interested in helping save the environment. Otherwise, many situations can seem too overwhelming and hard to comprehend. Kids may grow into adults with fatalist attitudes about the natural world. Instead of trying to help the environment, the opposite occurs. Problems seem so hopeless and complicated that trying to solve them just seems like a losing battle. If kids can visit and learn to identify with a place and

develop a personal vested interest in it, half the battle for conservation may be won.

This is where the Tremont institute comes in. Children who may get little or no repeated exposure to natural areas can come to Tremont with their class and stay from two and a half to five days, and a week or two during the summer. Even in this short amount of time, Tremont instructors help students have an intense learning experience that allows them to develop an appreciation for the Smoky Mountains, which often lasts into adulthood.

Tremont is greatly concerned about conservation although the curriculum does not always focus on solving major resource problems in Great Smoky Mountains National Park. Instead, instructors encourage students to think about simpler things. These are things that the kids can relate to such as how important the resources they use such as food, water and electricity are. They become educated as to the reasons why conserving them is important for a healthy environment and how that may relate to the Smoky Mountains and other ecosystems.

I have spoken with many adults that fondly reminisce about the days they spent at Tremont with their class when they were kids. A few have told me that coming to Tremont was one of the best experiences they had as a child. A few even said that although they had only been back to the Smokies once or twice since, their time spent at Tremont was responsible for creating in them a deep fondness and appreciation for the mountains.

I think about this, as I am knee deep in icy water examining aquatic insects with a group of excited students. I can only hope that all their Tremont experiences like this one will help them make the connection between love and appreciation of nature and the importance of preserving it.

•••

I am standing with a group of bright-eyed enthusiastic fifth grade students that have just arrived at Tremont. Their questions are flying at me fast and furious, like a swarm of yellow jackets. "Will we see any bears?" "Are we really going on a hike in the dark? Won't the bears eat us?" "When do we get to hike to the falls?" "How many miles will we be hiking?" I attempt to answer their questions as well as I can and I assure them that soon enough they'll be able to start exploring.

*Sometimes, the best way to teach is to just simply act as a guide, not an authority lecturing the students on facts.*



Each morning at 7:45, students help a teacher naturalist such as Ryan Young collect weather data and report their findings to their school group at breakfast.

Tremont file photo

# Thar's Music In Them Hills

by Jeremy Lloyd

Music has always been a part of Tremont programs, but lately this seems to be the case more than usual. Or perhaps I've just been listening more closely.

Bob Grimac, an old Tremont favorite (though he's not old himself), has delighted school groups with singalongs many times this fall. Bob usually leads kids in folk dancing, but lately he'd been getting out his guitar and getting kids to exercise their voices instead of just their feet. Bob has traveled around the world and brings a host of songs from a variety of cultures to share with his audiences. Sean McCullough, a singer-songwriter based in Knoxville, has also performed for and delighted several school groups attending Tremont this fall.

One new musical face at Tremont, though he's no new face to the Townsend area by a long stretch, is Mike Clemmer. During the fall season Mike played his dulcimer at the Autumn Hiking Elderhostel and the Fall Naturalist Weekend. Rock and roll proclaims three chords and the truth, but in Mike's case it's three *strings* and the truth. The mountain, or lap,

dulcimer, boasts only three strings, but that fact doesn't limit the number of songs Mike plays on it. In addition to his vast repertoire, Mike's special gift is his ability to play tunes on the spot called out by the audience. (As he will readily admit, this meets with varying degrees of success.) The same goes for when he plays his *banjammer*, a special creation of his own design that combines attributes of the banjo with those of the traditional dulcimer design. You really have to see and hear him play for yourself.

Songs can say so much about a place. And many songs that aren't about a place can remind us of one. Walker Valley itself has been the inspiration for a number of songwriters. Once such crooner is Leonard Marshal McCarter, a former Walker Valley resident whose collection of stories and songs I came across recently in our library. Little is known about him, but he left behind a legacy of songs about the place where he grew up. And although we have only the words now, it's fun to see what kind of melodies might fit them. Here's just one

verse from a song deserving of a melody:  
*On Old Fodder Stack we hunted  
All around Old Fodder Stack,  
How we love them little green valleys,  
And some day we are going back.*

Could the history of a place be captured in song? And if so, what would the Song of Walker Valley sound like?

Perhaps something like this: First, silence. Time passing. The slow uplift of orogeny (mountain-making) over millennia. The forest growing and changing hands through the stages of forest succession. Eventually the intermittent sound of fishing. Hunting arrows slicing the air. Before long the swinging of axe and froe, giant tulip logs being hewed into cabins. Soon, the noises of train whistle and more tree-felling as the lumber companies arrived. Then, with little left to cut, silence again. And following all of this, the sound of school buses and children, parents and hikers, bringing us to the present day and the end of the song. Though since this is where Tremont comes in it really isn't an end at all but a new beginning.

At some point in time a long while ago somebody opened his or her mouth and a strange sound came out. We've been singing and making music ever since—there just doesn't seem to be any end to it. I for one sure am glad about that.

## The Mystery of the Night Sky

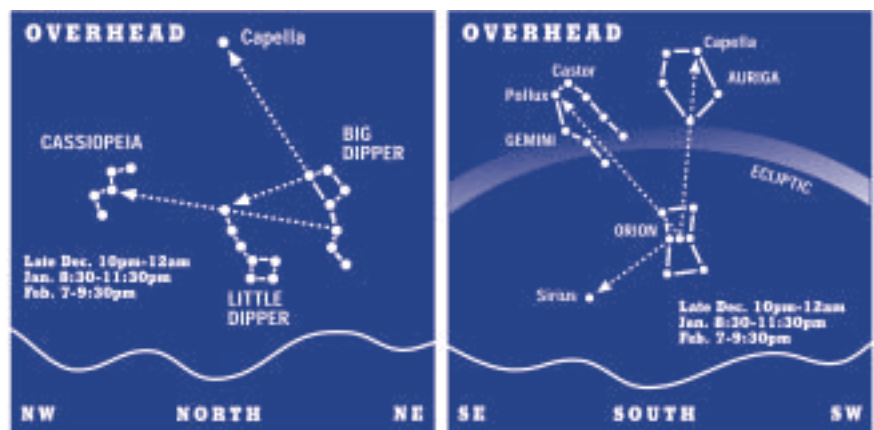
Many times since my arrival at Tremont, I have been asked to lead a group of youngsters out into the woods after dark. The students' excitement for simply being at Tremont, combined with the anxiety of entering a strange forest without a light, can make it all but impossible for them to relax and quietly enjoy the sounds of night around them.

However on many occasions I have gotten large groups of children to gaze quietly into the night and patiently listen. At those times their attention is held steadfast. This is by no means due to my leadership or ability to control a group of rambunctious sixth graders. It occurs simply when we lie in a field gazing upward. There is something about the mystery of the night sky that will hold a child in its spell for hours.

Once you have a few constellations under your belt... you are only just beginning. Pick up an astronomy book or check out these websites for more information: [www.pa.msu.edu/abrams/SkyWatchersDiary/Diary.html](http://www.pa.msu.edu/abrams/SkyWatchersDiary/Diary.html) and [www.skyandtelescope.com](http://www.skyandtelescope.com)

Let this be a simple gazers guide for you to learn the seven most prominent constellations of the winter season. The winter stars are brighter than stars of the other seasons. They seem to come alive when we are out and about during the holidays. Happy gazing, and may you share something new with those you love!

—Ryan Young



Here are two different star maps for the winter sky—one to use when you are facing to the North, and the other for the South. When you go outside you will be using the constellations of Orion and The Big Dipper to locate several other stars. It may be helpful to learn their shapes on the

map before you go out. When you make your way outside, face your body to the North or South sky and begin to find the star shapes above. Once you are comfortable finding Orion and the Big Dipper, you may want to locate some other shapes using the pointer stars indicated.

\*Planets are not indicated on the maps because they are so mobile. Do not be confused if you see a bright object in the sky that is not on the map. A planet will always be very close to the ecliptic line drawn across the South facing map.

# Tsiyahi

*Yes, they otter be here*

*by Adam Barnes*

It's 7:15 in the morning and I'm standing on the bank of the Little River. I can see my breath in the crisp morning air. The first light is creeping down the hillside above me, slowly revealing the fall colors that blanket the mountain. Birds dart in and out of the mist laying low over the field behind me, hiding the asters and goldenrod and smartweed. I turn back to the flowing river and begin to tie a tiny fly on the end of my line. I'll soon be expertly scaring off those young trout I saw hanging in the shallows yesterday. I glance up from the clinch knot I'm attempting and see two dark gray shapes glide towards me under the water. Enough time to think what huge trout they must be. Then a curious head pokes out of the water and stares directly at me. I catch my breath; two, no, three river otters right in front of me. They take turns swimming past to inspect me, then continue swimming downstream. The whole encounter lasted only a few seconds, but has not left my memory since.

If an early settler was out fishing the same stream back in the mid-1800s, a meeting like this would have been commonplace. River otters were as frequently seen as deer and other wildlife in the Smokies. They are fairly small creatures, three to four feet long and weigh between 10 and 25 pounds. Otters are excellent swimmers, with webbed feet to help propel them along, a stout tail that acts as a rudder, and a broad, flat head complete with sensitive whiskers and flaps to cover their nostrils. They thrive in cool, clean waters with a healthy food chain, and these mountains provided over 700 miles of ideal habitat.

But it was this abundance that eventually led to their gradual downfall. River otters belong to the family Mustelidae, which also includes weasels and mink. All were sought by trappers for their valuable pelts, and by 1896 otters were considered a rare inhabitant of the Smokies. As time passed, a combination of continued trapping as well as heavy logging of the forest surrounding the streams eventually led to the complete disappearance of otters

in these mountains. The last recorded sighting of an otter was in Cataloochee Creek in 1936, shortly after this area was dedicated as a national park.

Many years passed without the sight of river otters living and playing in the clear waters of the Smokies. But when the traps were removed and the logging stopped, the streams began to heal. In 1986, it was decided to try and reintroduce otters into Great Smoky Mountains National Park. As with many of the other reintroduction projects in the park, there were groups that felt strongly both for and against the idea. Some people felt so strongly for the reintroduction that the park received anonymous money in the mail to fund the project. But at the same time, many fishermen feared that the otters would decimate the trout populations in the

streams, causing more problems than they were worth. After much research and public input, the river otter reintroduction was given the go ahead.

The project started slowly, with 11 otters released in Abrams Creek on February 28, 1986. This population was studied closely, aided by radio transmitters implanted under the otter's skin. The results were better than expected with the otters adapting quickly to the cold mountain water. The fisherman's fears

were eased when the researchers discovered that the otters were dining on slow moving fish like white suckers and sculpins instead of the quick and agile trout. After this initial research, more otters were reintroduced around the park: fourteen in the Little River in 1988, six in Cataloochee Creek in 1992, four in Hazel Creek and two more in the Little River in 1993. In total, 137 river otters were released within the park between 1986 and 1994.

According to park biologists, the original population of otters are doing very well today. They have reproduced and are roaming widely both in and outside of the park. There is plenty of otter sign along many of the park streams, and numerous sightings reported annually. The reintroduction in the Great Smoky Mountain National Park was so successful that many other state and national parks already have or are planning to attempt reintroductions of their own. It is a heartening sign to know that with all of the negative influences man has historically had on the environment, we are trying to correct some of our mistakes. In the past, Cades Cove was called *Tsiyahi* by the Cherokee. The word translates as "place of the river otter," a name that has been given meaning once again.



Bill Lea

***In the past, Cades Cove was called Tsiyahi by the Cherokee. The word translates as "place of the river otter," a name that has been given meaning once again.***

# What is That? And That?

*Secrets to identifying unfamiliar creatures*

by **Charlie Muise**

On Sunday October 27 Michelle Prysby and I led a group of adult naturalists on a trip to Cades Cove. While there we found two creatures that we had a bit of trouble identifying. Fortunately we had a digital camera, (thanks to Kris Light!) notebooks, pencils, and access to several experts, so we were able to figure out what they both were.

At the Gregory Homestead, we checked some of the sheet metal squares that have been placed by Dr. Ben Cash of Maryville College. These squares are great for reptiles to hide under and retain heat, making them handy for a herpetologist to monitor what snakes and lizards are around. As is expected this time of year, most of the squares had no occupants. We did find one small snake that was not familiar to us. Because it is only 31 centimeters long, we decided it must be an immature specimen of a larger species. The snake is dark gray, with dull dark squares outlined faintly by light bands. By sending pictures and descriptions to several park service employees and Dr. Jim Petranka at UNC-Asheville, we decided it is a Northern Black Racer (*Coluber constrictor constrictor*). Initially we did not consider this possibility because the snake was quite docile, when most racers are very active and defensive. It must have been the cold weather! It was our detailed notes (i.e. dark brown eyes, no keels on its scales, description of the dark blotches on the back) that allowed Dr. Petranka to help us ID it.

We later stopped at a location where Michelle had success finding salamanders earlier that week.

Our high expectations were not in vain. We found a female Marbled Salamander (*Ambystoma opacum*) brooding eggs under the first log we rolled. In half an hour we found about a dozen Marbled, and a handful of Southern Red-backed Salamanders (*Plethodon serratus*). But we were stumped when we found a salamander with absolutely no markings on its black body. There were two typical Marbled Salamanders under the same log, and this one looked to be the same shape and size as the other two. The black one and one

of the typical Marbleds were brooding eggs—something that only Marbled are supposed to do this time of year. Initially we thought we might have found the more rare Mole Salamander (*Ambystoma talpoideum*), which nobody in our group had seen in the wild before. So either way, this was an exciting find! We had either a new (to us, at least) species, or we had a very unusual version of a species with a very small distribution in the park. (Marbled Salamanders have only ever been found in two locations of Great Smoky Mountains National Park.)

Once again good notes (number of costal grooves, shape of tail, size of head in proportion to body) helped us to determine the species. With more help from Dr. Petranka, and several other salamander experts, we determined this to be an unusual Marbled Salamander. Interestingly, none of the field

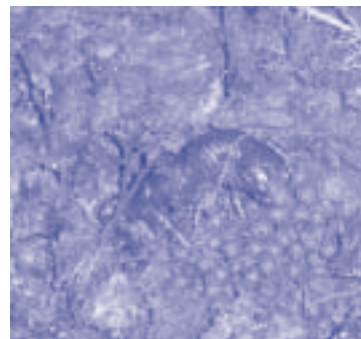
guides we had available that day even mentioned this as a possibility. Karyn Molines of Jug Bay Wetlands Sanctuary in Maryland has handled over 2000 Marbled Salamanders in the last several years as part of an intensive research project there. Of all those, one had no markings. We are still trying to determine how rare this is. In fact, if you are a salamander lover, I'd love to hear your opinion on this! My email is Charlie @gsmit.org

This is a case where the combination of several good field guides, and many years cumulative experience with reptiles and amphibians was not enough to identify everything we found. We needed to draw upon other important naturalist skills: photography, good note taking, and correspondence with others. Since many of our adult programs focus on these skills, it was very satisfying to see them put to good use.

*Top:* This is a typical Marbled Salamander, which was found at Gum Swamp in Cades Cove on October 27, 2002.

*Bottom left:* A very unusual unmarked Marbled Salamander. It was found brooding eggs at Gum Swamp.

*Bottom right:* Note that the proportions, shape and size of the unmarked salamander are the same as this typical Marbled Salamander, which was found under the same log, also brooding eggs.



Kris Light

# Not Another Bear Jam!

*Bear and loathing in Cades Cove*

*by Crawford Paylor*

If you have ever driven through Cades Cove in October, then you know that the traffic around the eleven-mile loop can be worse than the interstate during rush hour. A four-hour loop ride is not completely unheard of. These hold-ups can usually be attributed to a number of factors.

First, Cades Cove is a very popular place among tourists. Many people come to the park only to drive the loop. In fact, if Cades Cove were a separate national park, it would be in the top ten of national parks visited, having over two million visitors per year. Second, a diversity of wildlife can be viewed easily in the open fields of the cove through car windows, requiring little or no hiking for those who are so inclined. As a result of these wildlife viewing opportunities, on frequent occasions, an uneducated tourist will stop in the middle of the one-way road and get out of the car, trying to snap a picture or unfortunately to get close enough to pet or feed a bear. This popular diversion is known to us frequent Cades Covers as a "bear jam," because most times, these tourists block traffic for miles. Third, the fall colors drape the surrounding mountainsides, creating extraordinary vistas into the hills and bringing an influx of visitors, mostly in October.

The National Park Service has been recently trying to come up with alternatives to the current situation in the cove. An intensive Cades Cove Opportunity Plan is in the making as a long-term solution to the many transportation and management issues the cove is facing. Public comments and meetings are being solicited as a means to gather information and evaluate possible options as a starting point. A final plan will be presented early in 2004, but in the meantime, the traffic situation is not getting any better. Therefore, measures are being taken to try to improve the situation immediately. Many of these measures are experimental and the first of their kind, but seem to be functioning as a temporary fix.

First, a number of signs have been placed at various locations to inform visitors of the possible delays and alternatives. For example, signs have been erected on the approach to the loop stating that driving time may be 2-3 hours, thereby deterring people who may not have been planning on such a commitment. Also, signs have been placed throughout the cove indicating alternate routes, via Sparks or Hyatt Lane or exits through Rich Mountain or Parsons Branch Road. Signs also encourage people to be courteous to other visitors and use the pull-offs as parking areas, rather than the middle of the road.

A second temporary method of reducing congestion is an increased ranger presence. More patrols of the loop are being enacted as well as a number of rangers on bicycle patrol. Visitors are also being encouraged to avoid high-volume traffic periods, such as during the weekends. Less busy times include early in the mornings or in the middle of the workweek.

An "adverse conditioning" plan has also been underway to minimize human/wildlife interactions. These patrols of the loop are designed so that rangers disperse bear jams and frighten bears or other wildlife away from the roads. Using a number of tactics, this "adverse conditioning" process will hopefully train wildlife not to approach the roads again and to be afraid of humans, thereby minimizing these harmful interactions.

Several weeks ago, I was able to tag along with one of the rangers during an adverse conditioning round of the loop. As we approached the loop, we went over procedures for the conditioning. If we saw a bear or a deer within 50 yards of the road, we were to get out of the truck, walk

up to it, yell and scream, stomp and clap and hopefully scare it away from the road. In addition, we would break up any traffic jams and kindly ask people to use the pull-offs from then on. If the animals did not respond to the yelling and flailing, more drastic measures would have to be taken. By the time I had tagged along, the conditioning routine had been in effect for several weeks, and apparently, the very few wildlife encounters we had were a result of this previous conditioning. Honestly, I was slightly disappointed that we didn't see a bear, but I was more excited that all of the efforts from the park service to protect wildlife were paying off.

At the end of the fall season, all of these temporary traffic control methods will be evaluated to measure effective-



Lisa Horstman

***These "adverse conditioning" patrols of the loop are designed so that rangers disperse bear jams and frighten bears or other wildlife away from the roads.***

ness. Of course, none of these momentary solutions will solve the larger problems that the cove is facing, but we can hope that they will at least work for the time being to get traffic flowing, to help visitors have a more enjoyable experience in a wilderness setting and to provide adequate protection for our wildlife and all of the magnificent diversity within the park. If you have a question, comment or suggestion about the Cades Cove transportation issue, you can submit ideas and get updated information at [www.cadescoveopp.com](http://www.cadescoveopp.com).

# On Safari in the Wildest Smokies

*A teacher's perspective*

*by Sarah Hoyle*

After forty years of shooing bees away, I found myself, armed with nets and jars, on a sunny mountainside in 90° heat actively seeking the little darlings. This bee hunt was part of my ATBI teacher internship at Tremont this summer. Our searches also included moths, protists, granddaddy long legs, salamanders, birds, and slime molds. In order to find these creatures I stood shivering in a river during a rainstorm and, on another day, sweated more than I thought was humanly possible. I slipped on dusty mountainside stones and slimy river rocks. I trudged through mud, dodged stinging nettles, and acquired insect bites of an assorted variety.

Would I enlist again? In a hell-bender's heartbeat! I became acquainted with a new slime mold world inhabited by an infinite variety of organisms previously overlooked. After seven hours of identifying

moths I was in awe over the diversity of these ethereal beings and the hard work it takes to catalog them. I give thanks to the salamanders for allowing me (as though they had a choice!) to invade their homes. Each salamander find was a treasure and the process of measuring, weighing, identifying and releasing an adventure.

The spirit of Tremont, ATBI, and the Smokies was present throughout the summer, but perhaps most tangibly so in my experiences bird banding. On bird days I drove in so early in the cool and promise-filled mornings that the mountains appeared as ghosts in the mist. Some birds lay still, allowing themselves to be measured and banded. Others struggled and one intelligent soul even faked a stress attack, flying off the second his captor's hold was loose. Holding a wild thrush in my hand, feeling her heart beat, and releasing her, was no less than a spiritual privilege.

## Make Your Own Nature Journaling Kit

Who doesn't love the idea of nature journaling? Nothing helps us see more and understand more about the natural world than the process of recording information about what we are seeing. Nature journaling, whether done with the written word, a sketch, or both is a way of connecting with our surroundings.

The materials that can be used to nature journal are many and varied. Of course the only really necessary materials for successful journaling are paper and pencil, but the following items make the process more creative and exciting.

- **JOURNAL** Good journals usually have a hard back and quality paper. Spiral bound journals work well because they allow your page to lie flat while writing or drawing. The type of paper depends on what will be applied to it. Look for smooth papers for pen and ink work and watercolor papers for watercolors and watercolor pencils. The thicker the paper the better it will hold up in field conditions. A great resource for journals is [www.barebooks.com](http://www.barebooks.com).

- **PENCIL** There are a lot of pencils in the world. Choices usually revolve around lead

hardness. The B range signifies soft lead and the H range hard. A set of several hardnesses is great if you really like to sketch, however the old trusty # 2 pencil is right in the middle and a fine choice for beginning work.

- **ERASER** A favorite is a kneadable eraser. Found in all arts and craft stores, the kneadable eraser is gray and can be kneaded or twisted in to any shape. They do not leave smudges on your page. The only trouble with this type of eraser is that it picks up any type of dirt or lint found in a bag. It is best to store it in an old 35mm film canister between uses.

- **COLORED PENCILS/WATERCOLOR PENCILS** The best way to jazz up your journal is with the use of color. Colored pencils work well in the field as well as back home, where you might decide to add color to your field notes. There is a range of quality in color pencils as well as number of available colors. Try Crayola for a trusty name and good, widely available pencils. Watercolor pencils are magic. They give you the control of a pencil, but with a quick wash of water from a brush, the colors rise to a new level of brilliance. A favorite watercolor pencil is the Staedtler line. They offer good quality at a reasonable price.

- **PENS** Pens can be scary. Although many

This adventure was an internship granted me because I am a teacher. My challenge remains to take my experiences and knowledge back to my students. In the midst of the testing craze, I will search for ways to integrate ATBI into the curriculum. The majority of my students have not had authentic nature experiences. A focus on ATBI throughout the year would provide them with the background of their more nature literate peers. It is always a struggle for a middle school teacher such as myself to keep her hormonally affected students focused on their studies. ATBI provides those "hands-on" experiences that keep science engaging. I have long been a believer in the power of nature to affect my students from the most troubled to the most successful. In the past many of our outdoor expeditions have been separate from our classroom life. The ATBI internship has given me many ideas that will help me integrate the two areas.

My testimony would not be complete without mention of the fantastic folks with whom I was privileged to work this summer. Many thanks to you all for a grand time.

*Sarah Hoyle was an ATBI Teacher Intern at Great Smoky Mountains Institute at Tremont during the Summer of 2002. She is a science teacher at Vine Middle Magnet School in Knoxville, Tennessee. Her internship was made possible by a generous grant from Discover Life in America.*

people do not like using them in the field due to their permanence, they can be interesting to work with. Felt tip pens give bold lines that can be jazzed up by washing them with a little water from a brush. Even a standard ballpoint pen can record information. If you still don't like the idea, simply go over pencil sketches with pen when you arrive home and erase the pencil. Then you sketches will be preserved for all time and you will avoid the problem of smudging pencil lines. Some of the best pens are waterproof. Look for a set of PIGMA MICRONS (they come in different nib sizes) for great control for a reasonable amount of money.

- **FILM CANISTERS** Hold water for watercoloring, small objects, money for a drink, etc.
- **SMALL SPONGE** Good for wiping brushes, mopping up excess watercolor
- **PARACHUTE CORD/CARABINEER COMBO** Great for securing your field notebook to your belt.
- **PENCIL CASE** Handy to organize your kit.
- **LOUPE** necessary for studying buds, flower parts, small insects.

All of these items create a handy journaling kit that fits in a backpack or your glove compartment. Make your kit convenient and you will find even more time to explore nature through your journal.

—Amber Parker

# Breaking News from the Science Room...

## Harvestmen Hunting

Daddy Long Legs, also known as harvestmen (Order *Opiliones*) are familiar critters to most people. These creatures are not actually spiders, though they are relatives of them. Contrary to a popular myth, harvestmen are not venomous. They can be predatory, attacking other small invertebrates, but more often they are scavengers.

There may be as many as 50 species of harvestmen in the Smokies. Dr. James Cokendolpher of Texas Tech University is leading the harvestmen study for the All Taxa Biodiversity Inventory, and using many volunteers in his efforts to document harvestmen biodiversity and behavior. For 10-day periods during each season of the year, student and adult volunteers collect harvestmen from the sides of buildings in the park. This summer, the Teen Science Camp at Tremont collected dozens of harvestmen from the Tremont Office, Dining Hall, Dorm, and Council House. We collected again this fall, with a school group from Vine Middle Magnet School, an inner-city school in Knoxville, Tennessee.

This activity seems to be a hit with students, who start out afraid of the harvestmen, then become braver and often end up becoming quite fond of them. Evidence of such a transformation came to me from a Vine student, who sent a note begging me not to kill the harvestman she collected, dubbed "Frank" by her collecting team. Fortunately, Dr. Cokendolpher had requested live samples of harvestmen this season, so at least Frank did not meet his demise at Tremont.

## New Techno Tools!

We are continuing to enjoy our microscope,

video projector, and digital camera in the Science Room. This equipment allows us to show a whole class of students the wonders of a microscopic world without waiting for each student to look into the scope. Instead, they can all see the image on a TV monitor. We also can attach the digital camera to capture images



This image of a caddisfly larva (1 cm length) peeking out of its case was taken with our Nikon digital camera and stereoscope.

under the microscope, which we then can send to experts to help us with identifications. We have used this equipment regularly in our stream ecology lesson, for our moth project, to sort insects, and just to excite students with some neat technology! Other recent purchases of science equipment have included four new Global Positioning System (GPS) units to use out on the trails, new materials for collecting and preserving insects, and a set of work tables for the Science Room. Thanks to the Alcoa Foundation for funding our equipment purchases. Thanks also to Martin Microscope for a special discount on the microscope.

## To See or Not to See

Making and recording observations is a critical part of being a scientist. It is the first step of the scientific

method; we use observations to help us develop questions and hypotheses to investigate. Data we collect to test our hypotheses are also observations. Sometimes additional observations that might seem insignificant at the time can help us interpret our data later or recognize patterns we didn't notice before.

A well-documented observation includes a detailed description of what was observed, a precise location, a date and time, and names of observers. A photograph or drawing is often useful as well.

One of the most fun parts of my job as Science Education Specialist is to help our program participants record their observations in way that will be scientifically useful. We encourage students and adults to take detailed notes about their observations in their journals, and we post a list of observations in the Dining Hall for everyone to appreciate what's been seen lately. Periodically, we send our observation records to the appropriate scientists and park staff. These observations are helpful to researchers trying to inventory and monitor the natural resources of the Smokies. Here are some of the latest highlights from the observation list:

DATE	OBSERVATION	WHERE	WHO
9/12/02	Scarlet Kingsnake	Lumber Ridge, between Buckhorn Gap and the saddle	Crawford Paylor and Wesleyan School students
9/19/02	Luna Moth larva	Dorsey Branch	Aleta Leden-decker, New Horizon Montessori School
9/29/02	Copperhead, 12" long	Spicewoods Branch	Michelle Prysby and students from the salamander monitoring team
10/8/02	Walking Sticks mating	Lumber Ridge Trail, by rock outcrop	Charlie Muise and Hendrick's Methodist Day School students
10/11/02	Bobcat	Tremont Road	Bethany Hannah, Crawford Paylor and Fall Hiking Elderhostel participants
10/27/01	Marbled Salamander with unusual coloration—all dark with no pattern.	Under log at the Gum Swamp, Cades Cove	Charlie Muise, Michelle Prysby, Fall Naturalist Weekend participants

—Michelle Prysby, Science Education Specialist



# Looking Ahead

*Winter in the Smokies is wonderful, and we've got some great winter activities for you!*

## DECEMBER

### Tremont Science Fair

**December 9**

We will be holding our first ever Tremont Science Fair! Students who have conducted research with us will be giving poster and Power Point presentations about their work. We hope to have a good mix of parents, teachers, students, Park Service staff, and Tremont friends attending. It is a great opportunity for our students to experience the whole scientific process, including analyzing data and sharing results.

### Wilderness First Responder

**January 19-26**

Do you know how to respond to backcountry emergency situations? Anyone interested in the wilderness or in emergency medical training will benefit from this course. Instructors from Roane State Community College will lead the program. The curriculum will meet the Tennessee Dept. of Transportation's standards for First Responder while focusing on the special situations that may develop in the wilderness. Participants will be eligible for national registry and state testing upon completion of this program. The test for certification will be given on the last day of the course. Program lasts from Sunday evening to the following Sunday afternoon. Test fee, lodging and meals included in cost. Cost: \$705. There will be an additional fee to purchase text books.

## FEBRUARY

### Wilderness First Responder Refresher Course

**February 14-16**

If you have taken Wilderness First Responder in the past and are due for a renewal, this program will satisfy the requirements to renew certification in First Responder on the national registry. This program will also serve as an excellent review of wilderness medical information and skills. Limited enrollment! Program lasts from Friday morning to Sunday afternoon, meals and lodging included. Cost \$290.

### Project Leopold Facilitator Workshop

**February 14-16**

The Leopold Education Project (LEP) is an innovative, interdisciplinary educational program based on the classic writings of the renowned conservationist, Aldo Leopold. The LEP was developed to teach the public about humanity's ties to the natural world and to provide leadership in the effort to conserve and protect the earth's natural resources. The LEP utilizes hands-on/minds-on activities to combine content knowledge with creative and critical thinking skills to foster a relationship between students and their natural and cultural environments. This in-depth workshop provides 16 contact hours of accredited instruction in the use of the curriculum materials and teaching

strategies. Upon completion, participants will be certified to return to conduct in-service workshops for educators in their communities. Program lasts from Friday to Sunday. Cost: \$165 (includes meals, lodging, instruction and all materials).

### Environmental Education & The Arts

**February 21-23**

This fun-filled and inspirational early spring weekend is dedicated to using the arts to teach environmental education. Our featured presenter is award-winning singer and songwriter, Chris Rowlands. Chris performs a mixture of original music that teaches about science, nature, and environmental issues. He uses props, diagrams, and his engaging sense of humor to explain the mysteries of the world we live in. His creativity and imagination will get all participants engaged and involved in this lively and entertaining presentation. Chris Rowlands was recently featured presenter at the North American Association of Environmental Education conference and has toured and performed with Billy B.

Tap into your creativity and spark your imagination with hands-on sessions on a wide range of topics. Nature illustration, story telling, crafts, and music are a few of the weekend's activities. We will begin the weekend with a Friday evening concert by Chris Rowlands, just the thing to get you in the Smoky Mountain Spirit. Saturday is full of concurrent sessions that explore many aspects and methods of creativity. Some sessions to look forward to are: songwriting workshop, writing workshop, primitive skills, kaleidoscope magic, storytelling, nature journaling, dreamcatchers, and more. We'll finish Saturday with our Open Mike Night, a chance to share your talent with others. On Sunday we'll put it all together with Environmental Expression Activities, a favorite EE & The Arts tradition.

Come ready to laugh, play, and learn to use your creativity to explore your connection to the wild outdoors. Program lasts from Friday supper through Sunday lunch. Cost: \$165. One hour of graduate credit is available for an additional fee.

**2004 Environmental Education and the Arts** Tremont is proud to present John McCutcheon as our special guest. John will perform a Friday evening concert and lead a Saturday morning songwriting workshop. Dates are Feb. 21-23, 2004.



Tremont file photo

# Donations

*Thanks, friends!*

From 8/02/02 to 10/31/02

*Great Smoky Mountains Institute  
at Tremont is operated in cooperation  
with Great Smoky Mountains  
National Park.*



## FINANCIAL CONTRIBUTIONS

*Alcoa Foundation  
Friends of the Smokies  
Great Smoky Mountains Natural  
History Association  
Brackin Reunion*

## ANNUAL FUND

*Mr & Mrs William G. Sweeters*

## ENDOWMENT FUND

*Jane Creed in honor of Bill Cobble  
Roy Crawford  
Betty Voorhis*

## BROOKS LAYMON SCHOLARSHIP FUND

*Dr. Sarah Hallstrand*

## OTHER DONATIONS

*Carol Ware*

## VOLUNTEER WORK

*Robert Dowbiggin  
Robin Goddard*

## SCIENCE RESEARCH VOLUNTEERS

*Nichole Barnhart  
Jamie Bosecker  
Brooke Carter  
Joshua Edmonds  
Jacquie Fontentot  
Passley Hargrove  
Adam Heinrich  
Amanda Heinrich  
Sarah Hoyle  
Rachel Hughes  
Sharon Hughes and 8 kids from  
Seventh Day Adventist School  
Shay Olsen  
Evans Reed  
Miranda Reseigh  
Jasmine Rogers  
Margaret Stoudersire  
Jon Tully  
Robin Voorhis  
Cody West  
Jennifer Young*

## STAFF

teachers/naturalists *Adam Barnes  
Bethany Hanna  
Crawford Paylor  
Ryan Young  
Karen White*  
international intern *Artem Khatsko*  
sci/ed specialist *Michelle Prysby*  
sr. teacher naturalists *Jeremy Lloyd  
Charlie Muisse*  
school program director *Bill Klein*  
special program director *Amber Parker*  
food service *Jackie Davis  
Lori Flanagan  
Linda Hatcher  
Lois Tipton  
Toni Vann*  
grounds and facilities *Sam Crowe  
Sean Flanagan*  
registrar *Julie Brown  
Sara Crum*  
sales *Linda Vananda*  
office assistant *Nancy Williams*  
office manager *Kathy Burns*  
executive director *Ken Voorhis*

## BOARD OF DIRECTORS

president *Bill Cobble*  
vice president *Dick Ray*  
secretary *Herb Handly*  
treasurer *Wright Tisdale  
Cathy Ackerman  
Fred Lawson  
Norma McGee Ogle  
Bob Talbott  
Patrick Roddy*

*Printed on 100% post-recycled paper*

*Great Smoky Mountains Institute at*



**TREMONT**  
*connecting people  
and nature...*

Great Smoky Mountains National Park  
9275 Tremont Road  
Townsend, TN 37882

Non-profit  
Organization  
U.S. Postage  
**PAID**  
Permit No. 127  
Knoxville, TN