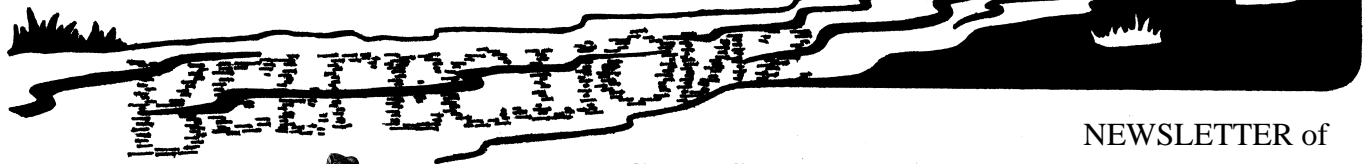


WALKER VALLEY REFLECTIONS



SPRING 2001



NEWSLETTER of
GREAT SMOKY MOUNTAINS INSTITUTE AT TREMONT

ONE WET NIGHT

One dark and stormy February night in Walker Valley my 16-year-old daughter returned from a basketball game around 11:00 and reported that it was raining cats and dogs out there. "Cats and dogs? I'll bet it is more like newts and frogs. Did you see any salamanders?" I asked. She reported that she didn't really look that closely.

Perhaps I have some amphibian genes somewhere because like my amphibian friends I have been drawn out on these rainy February nights more than once to see what I was missing.

I asked Bonnie Jo if she wanted to go. She replied, "Sure, let's grab our raincoats and flashlights."

And so we drove slowly down the Tremont road, in the pouring cold rain, trying to find the party. Shortly after crossing the Tremont bridge frogs bounded to the left and right all around us. We stopped to see several sitting in the wet road, their ivory bellies illuminated by the headlights. We hopped out to catch a couple of these slimy projectiles. The smaller males have a bit of speckling and are brownish. The larger females are orangeish pink. Their brown masks confirmed what we knew already. This was the night of the wood frogs!

There are many harbingers of spring but my favorite in these parts is the wood frog. His presence seems to shout "I know its early, but spring is on the way and I just can't wait!" Numerous spring issues of this

newsletter have documented wood frog activities and I've seen many an excited naturalist return with reports of their exploits on these wet February nights, or students of what they found the morning after.

As we headed further down the road we arrived at the place across from the lagoons and cut the engine. Above the river's roar we heard the frogs' quacking. A little girl a few days earlier had heard them and thought they were turkeys. We continued down to the "frog pond", a gully next to the road that fills with water during wetter periods. We hopped out and headed down the hill with our flashlights searching ahead. Staring back at us were hundreds and hundreds of eyes, mostly pairs of eyes set atop one another. On closer inspection we saw the orgy of writhing frogs and the resulting egg masses that they left behind. The pond was alive and the thousands and thousands of eggs laid will ensure that life continues on. The next morning we would find the huge conglomeration of egg masses gathered at one end of the pond. The wood frogs, for the most part, would be gone. A few may remain, spent and frozen on the pond's edge, often pecked apart by the crows. Gross perhaps, but in the scheme of things they accomplished what they came for. Wood frogs may be seen for a few more days especially if the rain continues but after that they will be gone, burying themselves beneath the leaves of the forest floor and rarely seen until next February. What a life! Ah, but the wonder of those few nights is something at which to marvel.

On the way home we watched for salamanders. They too have their special nights. We found a couple good-sized Blue Ridge spring salamanders. I've walked this road on similar nights and found more and larger longtail salamanders and black chinned reds, than I do all year in looking under rocks in wet places. They too are migrating to places where they will breed.

If it hadn't been so late (and cold) we might have looked for some spotted salamanders in a favorite gully of theirs. That amphibian magnetism (my daughter says that sounds like a frog stuck to the refrigerator) has more than once drawn me to find a like minded friend, don wetsuits and wade up to our necks in their breeding ponds, looking for these robust 6" long black salamanders with bright yellow spots. The spotted are just out a few nights and then, as members of the mole salamander family do, burrow deep into the ground, allowing their eggs to mature and develop into young larvae in the vernal ponds.

Bonnie Jo and I returned to the warmth of our house. We still have some cold weather before spring arrives, probably even another snowfall or two. But the night of the wood frogs has rolled out the carpet. Winter is on its way out and the new life of spring has begun. As John Muir said, "This grand show is eternal!" Why not grab a ringside seat and take it in? The wood frogs remind me that there is often a show going on under my nose and I need only to take the time to stop and watch with wonder.

- Ken Voorhis

TREMONT HAPPENINGS

TRANSITIONS

Wanda DeWaard has served as Special Program Director since 1997 but has decided to leave Tremont to pursue other interests. Wanda has enhanced our special programs, building a strong summer youth program, adding our wilderness first responder classes, and providing excellent workshops throughout the year to mention but a few of her accomplishments. We will miss her as part of our team but wish her the very best as she moves on.

Amber Parker has been hired as our new Special Program Director. Amber is coming from North Carolina where she has worked as EE program director at the Blue Jay Center for Environmental Education since 1994. She has a degree in zoology, is past president of Environmental Educators of North Carolina, is newsletter editor and web page designer for the NC Partners in Flight, enjoys birdwatching and hiking and is excited about moving to the Smokies. Welcome, Amber!

BOOKMARK CONTEST

Many of you are familiar with the Tremont bookmark that we give out each year. It lists program dates for the next year and has a cool photo or artwork on the front. Last year we had the idea to have a contest to have students submit art suitable for use on our next bookmark with the hopes of finding a winner. We got the word out a little late last year but several schools submitted entries and Marcus Davis from Perimeter Christian School submitted the winning entry that you see here. (if you haven't seen the color version get one from us because it looks great!)

We want to make this an annual event so please send us your student-designed art for our 2002 bookmark. If we select your student's entry for the cover we will give a \$50 gift certificate for Tremont shirts or books from our bookstore to be used by the student and his/her teacher (in whatever way you wish to split it).

The bookmark format is 2.75" X 7.5" (we can reduce it to that size but the design should fit that format). The art needs to be clear enough for a good scan (nice markers will work better than crayons or colored pencils). Include on each submission: (outside of the artwork area, but not on the back—it'll show through when scanned if it's written on the back), the student's name, age, school, teacher's name, and where we should send our response. Send by April 30 to: GSMIT 9275 Tremont Rd. Townsend, TN 37882 attn: Bookmark

TREMONT ANNUAL FUND ENSURES THE BEST PROGRAMS FOR ALL CHILDREN

January 1, 2001 marked the beginning of a new era for Tremont, as it became an independent, 501(c)(3) private non-profit organization. With its own Board of Directors and its own organization, Tremont will be better prepared to achieve its mission of delivering quality educational programs that increase people's awareness, appreciation, and understanding of our natural and cultural resources. (See Annual Report - Tremont Future next page)

We want to continue to provide excellent programs and to make sure that these experiences are available to *all* children. The staff at Tremont makes every effort to

maintain high quality programs while also working to keep costs down. However, the course fees do not provide all of the necessary support for Tremont. Even so, some students and some schools are not able to afford these programs.

While the Great Smoky Mountains Natural History Association and Friends of the Smokies will provide significant financial support for Tremont this year, we need additional funding from generous individuals like you.

We are beginning an annual campaign to allow our friends and supporters to help meet these needs. In 2001 we would like to raise \$30,000 through this annual campaign. These monies will help:

- provide annual scholarship support for students and schools that can't afford the standard course fees;

- purchase new equipment and supplies, such as software and hardware for PowerPoint presentations and water quality testing kits;
- continue and expand new programs like the Science Education Initiative; and

- ensure that Tremont has the necessary resources to deliver the best residential education experience at the least cost.

We hope that all of our "alumni," parents, and friends will consider a gift to this year's Annual Fund. Check your mailbox later this year for your opportunity to provide a donation. If you prefer to give now, contributions of any amount may be sent to "Great Smoky Mountains Institute at Tremont" 9275 Tremont Road, Townsend TN 37882. Thank you, in advance, for your support.

ANNUAL REPORT

TREMONT 2000

The following numbers confirm that 2000 was a busy and successful year at Tremont.

Number of groups	110
youth 3 day	60
youth 5 day	28
adult	22
Total participants:	5169
youth	3688
adult leaders	640
adults	769
program user days	20,081
program user hours	166,672
program days	465
calendar days	263
meals served	46,635
school groups- # of states	11
individuals- # states	31
park visitors (in vis. ctr.)	8631
financial aid 100 individuals =	\$5361

What these numbers do not show is the quality of the experiences, the lives changed and challenged, the lessons learned, and the many memories that those who have been through our programs have gained. The quantitative numbers are important because they support those qualitative results that we desire to accomplish. At the same time we remain dedicated to keeping quality the highest priority in what we do.

TREMONT FUTURE

The establishment of Tremont as a separate non-profit organization as of January 1, 2001 was successful and is an important step in helping us become the best that we can be. Our new Board of Directors are dedicated to working with the Park and Tremont staff to create a world class residential environmental education operation at Tremont. Staff and board have been involved in strategic planning and are working to formulate a vision for the future of Tremont. What is becoming clear is that that vision involves taking the great programs that have been developed at Tremont and making them even better.

A high priority is developing excellent programs for young people. We desire to continue to offer a diversity of programs but to focus on what we can do best first. We want to partner with schools, environmental educators and scientists to provide programs that model the best practices and methodologies that we can find. We want to be able to measure our success both in quantitative and qualitative ways.

Another priority is to become fiscally strong. That will mean increasing our visibility in the community and to those whom would benefit from our programs. It will also require raising supplemental funds. Our 2001 budget shows a \$135,000 loss because of expenses that were covered by the Great Smoky Mountains Natural History Association (GSMNHA) along with improvements and enhancements that we plan to implement this year. GSMNHA and the Friends of the Smokies will each provide 1/2 of that deficit in 2001. In addition GSMNHA demonstrated continued support of Tremont by contributing an additional \$50,000 in start-up or reserve funds.

The Friends are working with the Park to begin a significant capital campaign to raise funds for the Smokies and a significant portion of those funds will be designated for Tremont. The Tremont portion will be used to build an endowment to provide financial support for groups and individuals to attend Tremont and to meet ongoing operational needs, and for the redesign and upgrading of facilities. Tremont will be developing an annual giving campaign as well so that Tremont friends will have an opportunity to help in these efforts. See preceding annual giving fund story.

Our desire in terms of facilities is not to further develop Tremont but to, if you will, "undevelop" the Tremont facility. What that means is we desire to

create a master plan for the Tremont site that would provide flexibility and efficiency in meeting our program needs but do so in a way that causes facilities to blend with the environment, incorporate sustainable technologies, and be designed so they have less of an impact on the site and the Park than they do currently.

Tremont has a long history, reputation and important purpose that will continue well into the future. Connecting people and nature will remain at the core of what we do and who we are. We hope that you will continue to be involved in supporting us, helping us to grow, and working with us to ensure that our dreams for the future best meet the needs of the groups we serve and the Park that we are here to help protect.

- Ken Voorhis

"We should so live and labor in our time that what came to us as seed may go to the next generation as blossom, and what came to us as blossom go to them as fruit. This is what we mean by progress."

- Henry Ward Becher



ALL MY LIFE'S A CIRCLE

It is said that once a Circle is formed, it can never be broken. It goes on deep in our hearts continuing in each of us forever. We are a part of each other. We are all connected.

And so, I am very grateful to have many Tremont circles in my heart as I leave my position as Special Program Director.

Some of the circles here at Tremont are obvious. For example, there is the circle of the seasons with each season having unique beauty, challenges and lessons. We watch the mountains change along with the behavior of the many critters and plants. There is the circle of many familiar faces as they come, go and return again to favorite programs. There are new staff who come in, become friends and co-workers only to move on with new staff arriving once again. There is the circle of programs and activities that has become so familiar to many of us with times when we are so very busy and then times when we can take a deep breath as we make plans only to turn around and get busy again. There is information going out in the form of brochures, flyers, press releases and newsletters with information and responses coming back through letters, phone calls, e-mails and registrations. Each program has an opening and a closing circle. There is breakfast, lunch and dinner each day; morning bird walks and early activities as well as evening campfires and night walks. There is the circle of school children who come to the program, leave to go home and return many years later with their children. There are hellos and there are good-byes.

"It seems like I've been here before, I just can't remember when. And I get this funny feeling, that we'll all be together again."

Some circles are not so obvious or, at least, we don't choose to think about it. There are circles we all move in. The water cycle is one. The Earth moving around the sun is another. Our own circle of breathing in and out is constant but unnoticed. Insects are moving through their circle of egg, larvae, pupae and adult. The huge circle of life of which we are a part is there always. There is the cycle of our own blood moving from our hearts throughout our bodies and back to our hearts again. Each day we leave home, going out to work or play only to return home again. There is a circle whenever we run into a familiar friend once again. Circles are there. They are constant. They work.

It seems important to recognize and work with the circles in our lives. Circles teach us about having a sense of place; about balance and wholeness; about reaching a sense of completion; about learning to let go; about understanding and acceptance. It seems important to welcome opportunities that come just knowing that they will take us around in a circle again.

Tremont was one of those opportunities for me, a circle I happily stepped into. What I thought I would learn and what I did learn were very different just as the very reasons for taking the position were different than the real reasons I now recognize looking back. For me, it was meant to be and I walk away having given and learned more than I could have ever imagined. It's funny how one knows when a situation has come full circle; how one knows it is time to move on. The circle is complete.

"No straight lines make up my life and all my roads have bends. No clear cut beginnings and, so far, no dead ends."

The Cherokee have no word for good bye. It was simply understood that relatives and friends would meet again. Another circle. I agree. This is not a good bye. I plan to be around and involved in some different ways here at Tremont. But, meanwhile, thank you for the circles you have shared with me. You are in my heart and go with me on my new adventures.

-Wanda DeWaard

*"All My Life's A Circle"
by Harry Chapin*

Mountains Are Calling Me Home

Frost on the grasstops,
Chill in the air,
Mountains are calling me
home.

Ice on a still river pool,
Insects disappearing,
Mountains are calling me
home.

Leaves turning red and
gold
Birds disappearing,
Mountains are calling me
home.

Logs crackling in the
hearth,
Friends gathered around
the table,
Mountains are calling me
home.

-Mickey Larkins

SUMMER SCHOOL

I am from Maine. I was born there, raised there and all my family is there. We have been there since we hit the continent I suppose. Whenever someone asks me where I live I say Maine. It's just a real long commute. I do not doubt I will be back there for good one day but that always makes people wonder how I got here, and how I got into this type of work. I would have been hard pressed to answer that question in anything short of a 10-minute ramble a few weeks ago, but today I would say it must have been the "Summer School".

I began summer school long before I was enrolled in the public school system. Although I was too young to remember the first day of class I have been told it began as soon as my teacher could convince his daughter I was old enough to be away from home. My Grandfather, guide and teacher, wasted no time in introducing me to some simple yet amazing lessons the natural world had to offer. I probably took more naps in an old Grand Laker or a Datsun pickup as a child, than I did in a bed. We had too much to do, too much to see.

Although I call it summer school, when I was younger summer school didn't recognize but two seasons. Those were hunting season and my favorite - fishing season. (The Smokies and I agree on this apparently because it is fishing season year round down here.) Since I could hold a rod long before a gun, Gramp and I were always fishing partners but I had to wait till I was older to be anything but company on hunting trips.

Of all the things I learned about fishing, fish, lakes, streams, water, boats, people, trees, the woods, navigation and things I do not even realize I have learned from those times maybe the most important was patience and an enjoyment of where I am. Some might contest that my grandfather would be an interesting example of patience at best, but I spent many a day that

strung into weeks in the Allagash, or on Meddybemps lake or up Toma or driving the light line sitting, waiting for the fish to bite, trolling, talking, watching, hoping a deer would ramble by and I can say that I have never been so patient in my life as I was sitting next to him.

He was an old timer, from a place I can only visit and experience through his stories. I have always wanted to know what it felt like to set out with a load of apples pulled behind a horse heading for Boston down a rutted dirt road that has since become a paved and in places four lane road to Bangor.

I figure from his stories that the deer in northeastern Maine used to be as thick as they are in Cades Cove. You could count a hundred deer in the fields between his house and the bend in the road a quarter mile away. It was not like that when I was sitting with him. The trout were gone from many of the streams and Togue were not in the lakes like they had been. Nevertheless we still caught a lot of fish and got a bird now and again. I also can see today how we learned together and changed our ways over the years.

I can remember coming in from a long day fishing as the sun was setting and being up half the night filleting out the catch. By the end of our education together we might catch as many fish but only a few made it to the dock for filleting.

I was schooled by a man who came from a strong healthy environment used by few to sustain families, that changed to an overused sportsman's destination in his life. We saw some of the effects these changes had on the environment together and slowly, sometimes reluctantly adapted. I would say my grandfather grew up with the conquerors in a time when folks believed it impossible to overcome nature and the endless resources. He lived clear through to the time of conservationists who have seen the unimaginable decline of nature at the hands of

humans and made that transition wishing we had not let it get that far.

Like I said, I call it summer school even though it happened year round. The idea for this article has been years in the works and will probably continue growing as I figure out how, or feel its time to get more of my life and experiences down on paper somewhere. I am feeling a real need to keep connected with home while I am down here so I've been reading a lot of local Maine work lately. I was reading a compilation of Tom Hennessey articles my parents gave me in a book called Handy to Home and came across a painting of an old man paddling a canoe around a cove while a young boy fished. It was titled *Summer School*. It hit home with me. I've been there, that is a part of me, that is why I am here and that's where I'm heading. I have had my chance in the bow fishing and I guess it's that stern seat that is calling me.

Work in Progress, 2/19/01

-Jason Barschdorf

dream
toward the future
plan
toward the season
live
for the day
enjoy
the moment



note cards by Susan Fowler

WHY WE NOW DO THE WEATHER AT NOON

and other reports from our science program

Those of you who have recently brought students to Tremont may have wondered why we don't do the weather before breakfast anymore. Our data set of weather observations is second only to our phenology (seasonal occurrence) observations in size, dating back to 1990. The weather has usually been done in the morning. Why change?

Weather data is vital to our understanding of the other data we're collecting. Why did we have our earliest recorded sighting of a Mourning Cloak Butterfly today (February 8th)? It was probably because the temperature reached 23 degrees C today (73 degrees F), our warmest February 8th since we began our record-keeping. A long and mostly unbroken string of data helps us to say with authority things like...

- This December was the coldest of any month since we began keeping records. Year 2000 started with a warmer than average winter and spring. We also had some of our earliest bloom dates and insect appearance dates since 1985.
- Rainfall was lower than average to start the year and through the summer and fall. October was one of the driest on record, which was why the river was so low. We had higher than average rainfall in the late spring, November, and December, bringing us to an average year rainfall-wise, but this was not enough to make up for a very dry 1999.
- July averages our hottest month with highs averaging 89.6 F and nighttime lows only to 64 F. June and March are our wettest months and October is our driest (we have only just started to take records we can use to incorporate snow into a figure for total precipitation).

We could say more if our data set stretched back longer. Eleven years is nothing in the history of people in the Smokies and less than nothing in the history of life in these mountains. In the past million years we certainly have had rain and temperature extremes which put our eleven-year experience to shame. What we have is a start.

This fall we started doing our weather at mid-day so our records can be compared to other sites across the country and around the world. Tremont is now a GLOBE school, which means our weather data is entered on a web site and can be downloaded by other GLOBE schools in Russia, Nashville, or Nepal. If your school became a GLOBE school, you could compare at any time the conditions at your school with what's happening at Tremont: our weather, our air quality, our water quality, etc. Check out the web site at www.globe.gov.

In other news: check out our new "Science Education Initiative" web page at www.nps.gov/grsm/

[science.htm](#). You can learn more about the research projects going on at Tremont and ways you can become involved.

We have a number of equipment needs that would help us to improve our science education program. Below is a partial list of our needs. If you can help with any of these items, please let us know. Thank you!

High-powered squirt guns – for studying dragonflies
How to Know the Eastern Land Snails by Burch – an out of print book

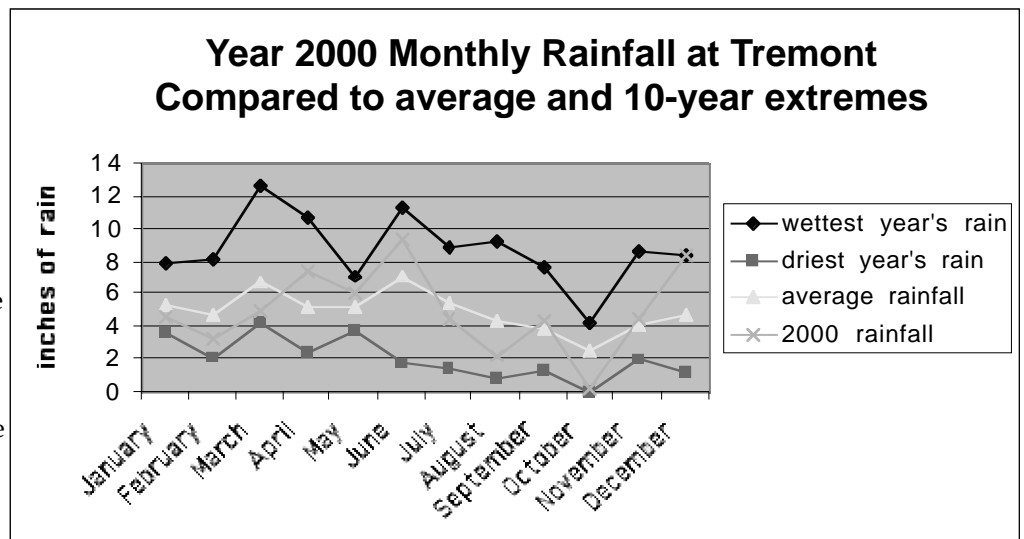
A small battery-powered refrigerator so we can go father afield with our moth work

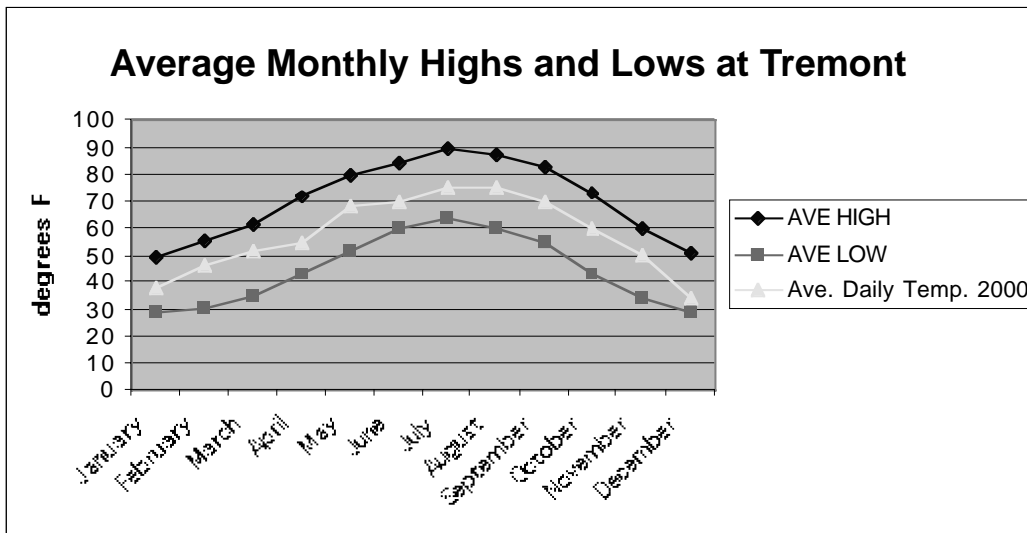
Waterproof Global Positioning System (GPS) receivers

A teaching dissecting microscope that two people can look through at the same time

-Paul Super

with special thanks to Jan Yeager, Dennis McElhaney and other Tremont staff who for many years insured that our weather data was collected and not lost to the paper-eating slugs.





SAW WHAT?

One of the tough things about living in a place as beautiful and diverse as Great Smoky Mountains National Park is that I always wonder what I missed when I was away on vacation. Last week I spent time in South Carolina with my friend Barb, who is a naturalist in Pennsylvania. We visited friends, saw some great parks, and as is a necessary component of any trip I go on, did plenty of birding. We saw some great birds, including an endangered species, and a lot of ocean and marsh birds that I have not been able to see in Tennessee yet. But wouldn't you know it – we saw the most interesting bird of the whole trip less than a half a mile from my house! As we turned up Tremont road, I saw a flash of something in my headlights. At first, I assumed the small, fluffy-looking critter to be an Eastern Screech Owl, which is common in the park, and which I often hear through my bedroom window. Backing up, I was able to shine some light on the bird, and saw it was not what I had expected. It didn't fit the Screech Owl pattern: too small, no ear tufts, the facial disks looked wrong. And Screech Owls don't have that chestnut barring down the breast... Because we had used the last of our film on our trip, we were not able to photograph this beautiful northern owl. But we were

able to watch it for about four minutes before it flew away.

The bird was a Northern Saw-whet Owl, the smallest owl in the eastern United States. I was particularly excited because although I have held several Saw-whets during banding operations in New Jersey and Maryland, this was the first time I saw one free in the wild. Though they are common in parts of their range, people rarely see Saw-whets because they are among the most secretive owls in the country. It was not until June 1941 that two Harvard University students documented this species in the Smokies, when they heard its call notes at the Clingman's Dome parking lot. It took another sixteen years before someone actually saw one in the park, this time near Mount LeConte.

This sighting was also interesting, because Saw-whets are a rare and declining species in Tennessee. In eastern North America, Northern Saw-whet Owls breed in coniferous or mixed conifer/deciduous forests of Canada, New England and the Great Lakes states. They migrate as far south as the northern portions of the Gulf Coast states. In the east, they breed no further south than the Smokies. This is likely because of the high elevations, which

allow Spruce, Fir and other northern trees to grow.

Saw-whets primarily eat rodents, but will also take insects and small birds. Though this is a migratory species, some remain in relatively cold, snowy areas. Those that do are believed to cache their food – in other words, even when a bird is not hungry, it will catch whatever prey is available and store it. This presents the problem of food freezing on them, but they have an interesting solution to this. People have witnessed Saw-whets sitting on frozen food, just as they would incubate an egg, in order to thaw it!

Most observations of Saw-whets in the Smokies have been in the high country. In January there were at least two observations of them in Cades Cove, making at least three observations of Saw-whets in low country this year. This is possibly indicative of an altitudinal migration – birds that breed at high elevations often travel to lower areas in times when snow and ice hamper efforts to find food.

All three sightings have been reported to the folks at the All Taxa Biodiversity Inventory, as part of that project's long-term goal of documenting all organisms living in Great Smokies National Park.

-Charlie Muise

UNDERFOOT AND UNDER-COVER

Ideally, we would be looking for a good limestone outcrop. There are such areas in the Park, but none that can be easily accessed from the trails at Tremont. So, we settled for a nice rocky slope along a nearby trail and sat down. As we lowered ourselves, our field of vision shifted, moving from the trunks of lofty trees down to their base. Here, we focused our attention. Sweeping away some leaves with our hands, we turned over rocks, pushed back a fine layer of soil, and leaned in. Closer. Even closer. Amidst the world living beneath our feet, we found *it*. There in the soil lay the tiniest, translucent shell, curled in upon itself tightly—empty. We hurried to locate our equipment, an assortment of modest tools: a few feet of flagging tape, scraps of recycled paper, and empty film canisters. We quickly affixed a ribbon to a nearby branch, and on a piece of paper we gave our discovery a number and described its location. We placed the piece of paper into the small plastic vial and with careful, slow hands picked up the shell and added it gingerly to the vial. Within half an hour, we had located a dozen different shells: white with etched cross-hatchings, bronzed and delicately swirled, black and flat, mottled with a toothy opening.

The shells are just the beginning (or end) of the story of these complex, small creatures. Land snails are gastropods, and like many of their kind, their soft bodies are enclosed in a calcium-rich shell that is secreted by the mantle. Interestingly, snails undergo a rotation of their inner body mass early in development, called torsion. Torsion in gastropods has the unfortunate result of twisting the gut, leaving the wastes to be expelled above the head and mouth. A variety of morphological and physiological adaptations have arisen in order that snails may cope with this somewhat compromising position.

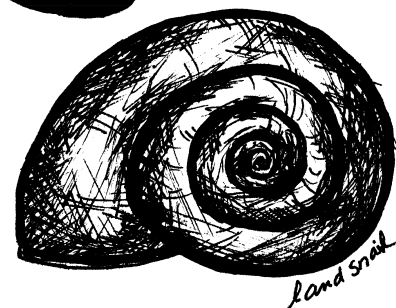
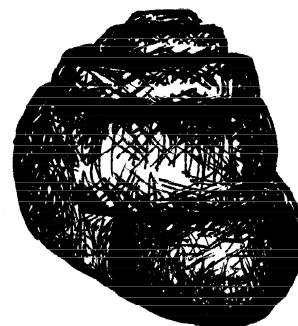
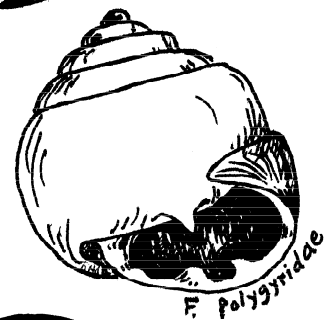
In addition to their shells and unique body structure, snails have other specialized adaptations. The sticky trails that so often advertise

their presence are created by a mucous-covered, muscular foot that the snail uses in locomotion and burrowing. If located while in motion, a snail will most likely be sensing the world through its well-developed head, which is comprised of a pair of eyes, two pair of tentacles, and a highly developed nervous system. Also located within the head region is a rasping tongue, or radula, which the snail uses during feeding.

Gastropods have extremely varied feeding habits. Some graze, some browse, some feed on plankton, some are scavengers, and some are active carnivores. Dan Dourson, a snail taxonomist with the US Forest Service, has been assisting with the ATBI's efforts to inventory land snails. Dourson writes that the Park is a particularly attractive area for land snails due to its "great range of altitude, plant communities, and soils" (ATBI Quarterly, Winter 2001). Within the Park, the richest sites for land snail diversity tend to be located at lower elevations, particularly in areas underlain by limestone, such as White Oak Sinks. The higher elevations, while presenting far less variety, are a historically isolated area and, as a result, are more likely to contain rare and endemic species. At present, the Park contains more than 100 species of land snails, some of which have been found nowhere else in the world.

Here at Tremont, we are helping with the identification and location of land snails by collecting shells. And fortunately, the shell alone is sufficient for identifying a species. Currently, Tremont program participants have collected nearly one hundred empty shells. Perhaps, one of these shells will indicate a species new to the Park, or even new to science. As importantly, our curiosity has brought us to our hands and knees, looking beneath the same rocks and leaves that carry the prints of busy feet accustomed to heading in other directions.

-Leigh Anne Milligan



SMOKE SIGNALS

A feature especially for teachers bringing groups to Tremont.

The phoebes are singing, the daffodils are blooming which can mean only one thing: it is time to start thinking about your school's visit to Tremont in 2001-2002. That's right, we have sent to your school a mailing with dates available for 2001-2002. Don't delay in sending in your requests. We want to make sure that your school's visit is a date that will work for you. Please give us a call if you have any questions or concerns about your trip and scheduling a date in 01-02.

SCIENCE AT TREMONT

Over the last few months, the Tremont teacher/naturalists have been working at incorporating science into the lessons that we offer. If you have an interest in having your students participate in scientific research that is both fun and educational please let us know! Research sounds like a dirty word to some, but how does hunting for snail shells or searching for salamanders sound? We also have a moth light that attracts hundreds of different types of moths, some of which have never been identified in the Great Smoky Mountains before. Just last year, a student from Wydown Middle School in Clayton, Missouri found a moth that had never been identified here. The name that was given this moth was Jack's looper moth in honor of the student who discovered it. What a great way to get kids involved in hands-on science while also contributing to actual research going on in the park!

UPCOMING TEACHER WORKSHOPS

Plan ahead for your trip to Tremont by participating in one of our adult workshops. These workshops are intended to give teachers and educators a variety of ideas and activities that can be used in the classroom. They are also a great way to get rejuvenated in the splendor of the mountains, make some new friends, learn about the natural and cultural history of the park and become familiar with Tremont and its surroundings.

These upcoming workshops include an Integrating Science Teacher workshop, Spring Awakenings Naturalist Weekend, Naturalist week and Naturalist Hiking week. Call for more information about any of these programs or read more about them in the Looking Ahead section of this newsletter and become part of the Tremont family.

WINTER AT TREMONT?

Just a couple of weeks ago, Christ Presbyterian Academy from Brentwood, TN visited Tremont. When they arrived at Tremont it was 65 degrees! The teachers from CPA had prepped their students to be ready for any type of weather; snow, sleet, rain, cold but not sunny and 70 (which it was on Thursday and Friday). "How can anyone learn about the forest in winter?" they asked. Well, what great opportunity to talk about how mother nature adapts and its mechanisms for confronting such situations. Also, what great evidence of the benefits of visiting Tremont this time of year. The views are wide open, you can see through the trees, and the landscape of the mountains is much more visible. Plus, there are not as many people here which can only enhance one's trip. If it weren't for winter, spring would never happen!

-Bill Klein

Here stand today, in the Great Smoky Mountains, the last hundred square miles of uncut primeval forest, the most varied and thrifty forest in the world, just as it stood, save added growth, when Columbus discovered America. It will all be destroyed in ten or fifteen years if the Government does not take it over and preserve it intact so that future generations may see what a genuine forest wilderness is like...

"Why should this last stand of splendid, irreplaceable trees be sacrificed to the greedy maw of the sawmill? Why should future generations be robbed of all chance to see with their own eyes what a real forest, a real wildwood, a real unimproved work of God, is like?"

We seek the woods to escape civilization for a time, and all that suggests it. It is one of the blessings of wilderness life that it shows us how few things we need in order to be perfectly happy. As "Nessmuk" says: "We do not go to the woods to rough it; we go to smooth it—we get it rough enough in town. But let us live the simple, natural life in the woods, and leave all the frills behind. I got my health back in these mountains and intend to stay here as long as I live. I want them preserved that others may profit as I have." -Horace Kephart 1913

LOOKING AHEAD

Why not join us for an upcoming experience at Tremont!

See our brochure, webpage: www.nps.gov/grsm/tremont.htm or call our office for more details.

INTEGRATING SCIENCE TEACHER WORKSHOP, APRIL 6 – 8

Why should kids have all the fun?! This is sure to be a fantastic weekend if you are interested in field science or if you plan to teach field science. This program is not limited to teachers. You will find out how to get both yourself and your students involved in hands-on science projects. This is your chance to participate in some field projects to include salamanders, moths, archeology and birds. Meet with teachers and others who have successfully integrated field research projects into their curriculum or programs. Learn about additional research opportunities with the All Taxa Biodiversity Inventory. Program lasts from Friday supper to Sunday lunch. Cost: \$140. Graduate credit available for an additional fee.

SPRING AWAKENINGS NATURALIST WEEKEND, MAY 18 – 20

There is still some space in this popular program for naturalists, outdoor enthusiasts and teachers alike. Learn about spring in the Smokies with sessions on wildflowers, edible and medicinal plants, trees, salamanders, birds, moths, ferns, mushrooms and more. Nature awareness, observation and interpretation techniques will be emphasized as we ramble and explore. Come prepared to be active and outside. Program lasts from Friday supper to Sunday lunch. Cost: \$140. Graduate credit available for an additional fee.

SUMMER IS COMING! AND THERE IS SOMETHING FOR EVERYONE!

Call now for details or to register. These programs fill early!

NATURALIST WEEK, JULY 9 – 14

This week of learning, exploring, and sharing is for naturalists, teachers, and outdoor leaders—anyone interested in an inspirational and educational time in the Smokies. Hike to waterfalls, learn wild edible plant identification, investigate fungi, and stalk salamanders in one of the largest wilderness areas east of the Mississippi. Naturalist, educator, and humorist David Stokes returns to Tremont to share his techniques for making learning exciting by using songs, stories, and riddles. Additional guest presenters will offer their expertise on bird watching, plant identification, Cherokee cultural history, geology, and earth skills. Participants will go home loaded with ideas for connecting people of all ages with nature! Program lasts from Monday supper to Saturday lunch. Cost: \$265.

NATURALIST HIKING WEEK, JULY 9 – 14

Come to the mountains and climb 'em. Each day will feature a different hike led by one of our naturalists who will offer insight into the wonders of the park and discuss the issues that face it. Participants must be in good physical condition and be able to hike 6-14 miles a day in rugged mountainous terrain. Participants will also have the opportunity to take a "day off" and choose from activities going on during Naturalist Week. Share the evenings with Naturalist Week participants, and enjoy special speakers, night hikes, and more! Program lasts from Monday supper to Saturday lunch. Cost: \$265.

SUMMER BACKPACKING PROGRAMS FOR TEENS!

Slip into the swirling mists of the "place of blue smoke" for a 6 or 11 day backpacking program. Lace up your hiking boots, shoulder a pack, and explore the Smokies' wilderness and enjoy other great adventures with your friends! Explore little-known places while developing outdoor living skills. The program is full of opportunities to search for wildlife, tell campfire stories, go snorkeling in mountain streams, and investigate park resource management issues.

-WILDERNESS ADVENTURE CAMP, JUNE 18 – 23, JUNE 25 – 30, JULY 2 – 7 cost\$300

-NATIONAL WILDLIFE TEEN ADVENTURE, JULY 16 – 26 cost\$710

SUMMER FUN FOR YOUTH AGES 9 – 12 YEARS !

Join a fun-loving group of young adventurers to discover the hiding place of the slimy salamander, ride the currents of a mountain stream, and tell tall tales around the campfire. Campouts, cookouts, swimming, hikes to waterfalls, games, and presentations by special guests. Make new friends, learn about the earth, and have a blast in the process!

- DISCOVERY CAMP, JUNE 18 – 23, JUNE 25 – 30, JULY 2 – 7 cost\$240
- NATIONAL WILDLIFE RANGER RICK CAMP, JULY 16 – 26 cost\$680

TEEN SCIENCE CAMPJULY 16-26 AGES 13-17

Would you like to watch a salamander hunting for prey? When you see a moth, do you want to know what kind it is? Do you ever wonder why that mushroom is growing right there? Do you want to make a difference? If you answered yes to these questions, you're ready for Teen Science Camp. Learn about the natural world and the methods scientists use to study it by participating in science projects in the national park. Projects may include study of salamanders, moths, birds, and plants. It will be hard work, in the water and on land, but fun as well, including an overnight backpacking trip. Attendance is limited. To apply, please send a letter explaining why this camp is right for you, and a letter of reference from a teacher or other adult with your registration form. cost \$595

GREAT SMOKY MOUNTAINS INSTITUTE AT TREMONT PROGRAM REGISTRATION FORM

Please fill out a separate form for each person
registering.

NAME (as you want it on your name tag)

ADDRESS _____

_____ ZIP _____

PHONE _____

e-mail _____

age (if under 18) _____

Program title

Program date _____

Amt. enclosed _____

Return to: GREAT SMOKY MOUNTAINS
INSTITUTE AT TREMONT
9275 TREMONT ROAD
TOWNSEND, TN 37882
or fax to: 865-448-9250



To register by credit card call: 865-448-6709

Minimum deposit for a three-day program is \$50, and for all other programs is \$100. The balance is due 60 days prior to the program. Cancellations received in writing 60 days prior to a program will receive a 75% refund. Cancellations received less than 60 days prior to the program will not be refunded.

DONATIONS

Thanks to all of the following !

FROM 11/12/00 TO 2/16/01

Financial Contributions

*Christ Presbyterian Academy Clayton Elementary
Jones Valley Elementary Tremont Reunion Patricia Twilla*

*in memory of Carolyn Horner
Bob Horner*

*in memory of their Families
Jane Barnes & Don Graham*

Other Donations

*Cedar Creek WoodWorks Sam Crowe
Evelyn Davis Kirk Lucius Linda Sjaardema
Ms. Betty Reed*

Volunteer Work

Robert Dowbiggin Robin Goddard

Science Research Volunteers

*Jessie Breedlove Jacob Brennan Aaron Burns
Amanda Heinrich Erin Henegar Tanner Jessel
Candy Keller Krystal Keller Teddi Kreutzberg
Bill Sherman Chris Sherman Laurie Sherman
Steven Sherman*

Contributions to the Endowment Fund

11/12/00 to 2/16/01

*Robert Dowbiggin Wayne Clements & Diane Haines
The Woodpickers*

In loving memory of Miss Elsie Burrell

*Jennifer Arnold Nancy & Tom Condon
Joseph Dreimiller Kathy Newman and Bob Durham
Linda Sjaardema Juanita Theil
Betty Voorhis*

*In memory Christine Clark
Raymond and Norma Clark*

GREAT SMOKY MOUNTAINS INSTITUTE AT TREMONT

GREAT SMOKY MOUNTAINS INSTITUTE

AT TREMONT

IS OPERATED IN COOPERATION WITH
GREAT SMOKY MOUNTAINS NATIONAL PARK

PROGRAM CALENDAR

STAFF

teacher/naturalists

Karl Haloj II

Jennie Lee

Leigh Anne Milligan

Aimee Wilson

international intern

Anya Marysheva

sci/ed specialist

Paul Super

sr. teacher naturalists

Jason Barschdorf

Charlie Muise

school program director

Bill Klein

special program director

Wanda DeWaard

food service

Sam Crowe

Jackie Davis

Lori Flanagan

Lois Tipton

Sue Tipton

Toni Vann

grounds and facilities

Sean Flanagan

registrar

Lainie Frye

sales

Linda Vananda

administrative assistant

Kathy Burns

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MARCH

18-23 ELDERHOSTEL - HIKING

APRIL

6-8 INTEGRATING SCIENCE - TEACHER WORKSHOP

20-23 SPRING PHOTOGRAPHY WORKSHOP

20-22 SPRING ADULT BACKPACKING

MAY

18-20 SPRING AWAKENINGS NATURALIST WKND

JUNE

10-16 GRANDPARENT/GRANDCHILD ELDERHOSTEL

18-23 DISCOVERY CAMP 1

18-23 WILDERNESS ADVENTURE CAMP 1

25-30 DISCOVERY CAMP 2

25-30 WILDERNESS ADVENTURE CAMP 2

JULY

2-7 DISCOVERY CAMP 3

2-7 WILDERNESS ADVENTURE CAMP 3

9-14 NATURALIST EDUCATOR WEEK

9-14 NATURALIST HIKING WEEK

16-26 NWF WILDLIFE CAMP (& EXPLORERS -12)

16-26 NWF TEEN ADVENTURE 1

16-26 HIGH SCHOOL SCIENCE PROGRAM

30-AUG 4 NATURAL RES. COLLEGE CONSORTIUM

Contact us for information on any program.

Information is also available at our website:

www.nps.gov/grsm/tremont.htm

E-mail us at: mail@gsmit.org



GREAT SMOKY MOUNTAINS INSTITUTE AT TREMONT

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