



Jeff Breazele's Trail Journal

Remember if you want to contact me for any reason my email is Jbreazeale@reserveatlakekeowee.com

Issues 1-25

Trail Journal Issue 1

I'm very happy for the opportunity to bring the outdoors inside to you. You have an awesome trail system at your doorstep. So let's get going.

Late Tuesday afternoon (1-11-05) I visited Old Granite Dome Trail. Even in the "dead" of winter, the woods are alive and well! The huge granite area is covered with several types of moss and lichens. Several Yucca plants can be found on the "islands" of soil atop the rock. After a short walk down the trail I came to an outcropping of granite where I found Resurrection Fern (*Polypodium polypodioides*) growing on rock and tree faces. As this plant loses water the fronds, (leaves of a fern), curl up and turn brown. At the first touch of moisture they will unfurl and become green again, hence the name Resurrection Fern. The spores on the underside of the fronds are easily seen. Several examples can also be found on Turkey Ridge Trail near the lake. On the Chestnut spur I saw the remains of an old wasp nest. I couldn't see where it had originally been but it was an interesting find. Coming to the end of the spur I thought it was beginning to rain but soon realized it was the waterfall on the creek. What a beautiful place! Back on the main trail I found a log covered with Turkeytail fungus (*Coriolus versicolor*). And they truly live up to their name. The end of the trip ended in spectacular fashion. Curled up on the leaves was a Northern Brown Snake (*Storeria dekayi dekayi*). Perfectly harmless, it is very often mistaken for a Copperhead, though I see no resemblance at all. Because these snakes spend all of their time on or under the ground they can tolerate cooler temperatures. So the recent warm spell is perfect for them. Can you tell snakes are my favorites?

Old Homeplace Trail has always intrigued me with its combination of natural and local history. What a difference a few days can make! Monday afternoon (1-17-05) the thermometer in the car reads 38 degrees. After parking at Turkey Ridge Park I headed down to the home site. The fresh fallen pine needles and the open space under the trees made for very quiet walk. I was interested in the huge pile of granite rocks and boulders that were the source of stone for the chimney at the home site. Normally overgrown and perfect shelter for all kinds of wildlife, today it was still and quiet. The deep gaps and holes here create an ideal climate for any creature that needs to keep its winter temperature above freezing. Patches of Running Pine (*Lycopodium flabelliforme*) are thriving on and along the trail. This evergreen can easily cover hundreds of square yards. Matchstick moss (*Cladonia cristatella*), which is actually a type of lichen, gives a tiny flash of color. You will find it growing on stumps or fallen logs and timbers.

I hope you have enjoyed my ramblings about the simple pleasures of taking time to notice the little things. Every few weeks I will report on what's growing and going on outdoors. If you have any questions or photos you would like to share or discuss, you can email me at Jbreazeale@reserveatlakekeowee.com. I will answer as quickly as possible. At the end of each journal I hope to include information on related events in our region along with fishing tips I've received from some of the best fishermen and women on Lake Keowee. Thank you!

The 8th annual Great Backyard Bird Count (GBBC) Will be Held on February 18- 21 at Table Rock State Park. Volunteers provide vital information for research in the health of bird populations here and across the country. This will be the only official site in South Carolina this year. You can meet at the park visitors' center at 8:30am on Feb. 19. Call Scott Stegenga if you need more details. Or if you want to count at home log on to www.birdsource.org/gbbc for how report your findings.

The Dept. of Natural Resources has a website with a wealth of information including fishing and hunting tips, weather effects, and all the legal data you would want. Their website address is www.dnr.state.sc.us. They are hard to beat!

Trail Journal Issue 2

January 28

I started out to walk the second leg, as I call it, of the Old Homeplace trail. I turned right around when the sleet and freezing rain hit me. So much for walking in the woods covered with snow. I do predict that we will get one average size snow (2 to 4 inches) before it's all over. The old wives' tale declares that you will receive one snowfall for every fog after Labor Day. And each snow will be correspondingly heavy as the fog. We had 3 "big" fogs and 8 "small" ones. So the way I see it we are way overdue.

February 11

every day I attempted a trip to the trails, the weather wouldn't cooperate. Most days I take my camera so a little rain can foul things up. I did make one short trip down Turkey Ridge trail. I was trying out a new camera and not having too much success. I saw several different species of birds. One group caught my attention because there were so many of them. I had a hard time seeing them clearly because it was getting late. But once I got a good look they were easy to identify. American Robins (*Turdus migratorius*) filled a white oak. It seemed they were very curious about my presence and had there been more light I may have been able to take a decent picture. A large Pileated Woodpecker (*Dryocopus pileatus*) flew through the woods. This black and white, crow-sized bird is the largest woodpecker in our area. Just a few minutes later a Red-bellied woodpecker flew by. It was as if someone down the trail was releasing them. The name, which is somewhat deceptive, comes from a faint reddish tinge on its belly. Its head is bright red from the forehead down the back of the neck. I was able to get a shot of it. If you have suet in a feeder you may be able to attract these interesting birds.

March 17

At last some decent weather and a great walk on Turkey Ridge trail. Spotted Wintergreen was everywhere in the drier areas and especially under pine trees. The leaves, which are not spotted but striped, look like small, skinny holly leaves. A tea brewed from the roots is reputed to "help" with kidney problems. Small bell-shaped flowers atop a 6 to 8 inch appear in April, and then fade quickly. Rattlesnake Plantain (*Goodyera pubescens*) is also abundant.

March 25

Good Friday. I hope all of you have a great Easter holiday. The temperature is in the low 70's and the birds and the bees are everywhere, along with lizards and a Black Racer (*Coluber constrictor*) which got away before I could photograph it. A Carolina Anole (*Anolis carolinensis*) and a Five-Lined Skink were enjoying the sun and heat. Soon I'll be reporting on the wildflowers and their blooming times. But don't wait on me. Get out there and enjoy this gem of the foothills.

Trail Journal Issue 3

March 29

I wanted to visit the last section of Granite Dome trail, which I hadn't seen in several weeks. I parked at the area beside the tunnel and hiked down the bank and through the tunnel toward the lake. As you exit you can find Sweet Shrub (*Calycanthus floridus*), not yet blooming, and rounding the curve to the lake, an uncommon plant, Catawba Rhododendron (*Rhododendron catawbiense*) will begin to flower about the same time as its larger cousin, Great or Rosebay Rhododendron (*Rhododendron maximum*). Christmas Ferns (*Polystichum acrostichoides*) are everywhere. Fiddleheads, the developing fronds of a fern, are replacing last year's winter-worn leaves. Pale Yellow Trillium (*Trillium discolor*) are set to bloom. We are blessed to have so many of these uncommon plants which exist only in the Savannah River drainage basin. Common Blue Violets (*Viola sororia*) are everywhere. They are highly variable and range from dark blue to nearly white. Halberd-leaved Yellow Violets (*Viola hastate*) are just about gone. A few are still about. A yellow violet? A halberd was an axlike weapon used in the middle ages. It got dark in the woods faster than I hoped so I packed it in. On the way home I took pictures of two trees that are the dominant showoffs so far this spring. White flowered and shrub-like, Serviceberry (*Amelanchier arborea*) blooms at the same time shad swim upstream to spawn. Hence the nickname, Shadbush. Area residents call it Sarvis. Oh, by the way, shad are small 2 to 5 pound saltwater fish that swim up freshwater rivers to spawn. They have quite a history and there is a shad festival in Grifton, North Carolina, if you're really interested. Those pink or purple flowers you are seeing in the small to medium sized trees belong to the Eastern Redbud (*Cercis Canadensis*). You may observe flat bean-shaped pods in the fall, the tree's fruit. The leaves are heart-

shaped, almost like a valentine. There is an interesting legend about the Redbud and its flowers. The story goes that the flowers were once white, and then Judas Iscariot hung himself from this tree and the flowers turned red, either stained with blood or from shame.

April 9

Masters weekend! This is one of the most beautiful days! And there isn't a minute to lose. I can't remember an explosion of wildflowers this fast in my life. And in a few weeks they will give way to the longer lasting summer blooms. So let's get started! I left Turkey Ridge Park and headed down Old Homeplace trail toward the lake. Lots of Loblolly pines line this path thick with pine needles, or pine straw if you prefer. It opens onto an old logging road that parallels a small creek. Painted Buckeye trees are everywhere. Compound leaves, usually 5 in number, are in a shape that somewhat resembles the ribs of an umbrella. This is called a palmate pattern. They are topped with red or yellow flowers. Wildlife will not eat the fruits because they, along with the leaves, are poisonous. Pawpaw (*Asimina triloba*) is common here as well. The small brown flowers will yield 1 to 2 inch oval fruits that are eaten quickly by birds, opossums, and other animals. Ten days ago I saw Pale Yellow Trillium ready to blossom. Well, they are everywhere. Most are opening, showing their typical rounded petals. Just up the path Bloodroot (*Sanguinaria Canadensis*) is sending up its flower stalk to bloom in just a few days. The leaves, as in this picture, are usually palmate, but many of ours tend to be nearly circular. The roots contain a red juice that was used by Native Americans for a myriad of ailments. It does contain several compounds that are being researched for possible cancer treatment and other illnesses. Now I'm really getting that mountain feel. The trail rises and falls. One minute I'm beside the creek, the next I'm 50 feet above it.

And the surprises just keep popping up, literally! On the upper bank, growing in abundance under an oak tree is a very unusual plant. Squaw-root (*Conopholis Americana*) sometimes called Cancer-root lacks the chlorophyll needed to make its own food. Light tan to brown, it is a parasite feeding on oak roots. The flowers will die in a month or two but the stem can last well into winter. Pinxter Flower (*Rhododendron periclymenoides*) is just starting to show off. Some books call it Pink Azalea. I've always called it "Honeysuckle Azalea". I appear to be the only one, though. You can find them on slopes in wooded areas. I was ready to call it a day so I started back and noticed the Dog-hobble (*Leucothoe walteri*) that grows along all the streams here. The tiny bell-shaped flowers were just starting to show. Dog-hobble grows in such a tangle few creatures can transverse it. Driving home the Dogwoods (*Cornus florida*) are as full as I've seen in years. There is a legend behind this beautiful tree. The wood for the cross on which Jesus was crucified was from the Dogwood. As a penalty God cursed the tree and from that time on it would never again grow large enough to be used in that manner. The petals, shaped as a cross bear the stains of His pieced hands and feet. A crown in the center is his crown of thorns. I can't list all the other sights, trees, insects, plants and other odds and ends or I'd be writing for several weeks. All of the flowers I've mentioned won't last long. Mountain Laurel, Rhododendron, Sourwood, Tulip Tree, Iris, Sweet Shrub, Trilliums and scores of others will be blooming in the next few weeks. Some may even be there now. You don't have to know the name of everything to appreciate what a treasure you have. Don't miss them. Get out there and enjoy it!

Trail Journal Issue 4

Tornadoes, hail, heat, cold; we've had it all. I'm not sure if the weather has anything to do with it, but this spring has produced some of the earliest and most beautiful wildflowers I've seen. The variety of birds, lizards, and other animals is pleasantly surprising as well. And they seem to govern my adventures. One day I'll find ferns, rare or common, growing together or developing early. Another day the birds seem to have their own idea of a Hitchcock thriller, showing up in similar numbers, or so it seems. I have so many beautiful photographs of all of these I should write very little and simply show them.

April 18

Border spaces are being created as some of the pure pine stands are thinned, and the meadows, golf course and apple orchards open up new areas. These are places where open areas meet woods or forest. Most birds prefer this type of habitat. I believe this is the reason for our bird explosion.

It's hard to mistake the American Goldfinch (*Carduelis tristis*). Males have bright yellow bodies, black caps and black wings with white bars. The females are nearly identical but they are a bland olive color instead of yellow. With a beautiful song of too-wee too-wee too-wee, purty-purty-purty, sweet-sweet-sweet, and vivid red feathers, Cardinals (*Cardinalis cardinalis*) sound as beautiful as they look. At least the males do. Most female birds are nondescriptly marked so they are less noticed while sitting on the nest.

The female Rose-breasted Grosbeak (*Pheucticus ludovicianus*) is another example. She is brown and white streaked with bold white stripes above and below the eyes. Her mate has a black head and black wings with white bars. Its breast is solid white except for the red or rose bib on its breast. What a contrast! Their song/voice is similar to the Robin's "cheerily, cheerily", preceded by a metallic "pink" or "clink". As May draws to a close the opportunity to see these birds lessens until October. I found one with an orange breast color instead of red. I don't know if this is rare but it is the first one I've seen.

Carolina Chickadees (*Parus carolinensis*) boss each other around with their chickadee-dee-dee-dee song. They will, as many of the birds mentioned here, tolerate the presence of several other species of birds. Chickadees are the alarm system of other birds in the area as they call out a series of short, raspy hisses when they feel threatened. Unlike the other birds mentioned here both sexes are nearly identical.

All of these have been in the area for the last several weeks and I have been taking pictures as the chances occur. I didn't want to give you the idea I'd seen all of these on the same day.

On this day I did find some wonderful plants including some of my favorites. I was curious if I could find any Pink lady's slipper (*Cypripedium acaule*) blooming or if I was too late. There is a large patch on Old Homeplace trail, and I was right on time. I can see why they are also called "moccasin flower". They will soon be marked with a trail sign that warns not to try to transplant because they require an acid soil and a special fungus to be present in the soil in order to survive. I tried to plant a couple for my mother on Mother's Day at her house in Highlands, N.C. They didn't make it. But they are interesting plants!

Mayapple will bloom in a few weeks. My photos, however, were not what I hoped so I'll try again later. You can find them to the right of the old chimney as you face it. The old homesite is a fern fantasy. As I left the Mayapples and headed for the springhead I discovered a small cluster of Rattlesnake Fern (*Botrychium virginianum*). They are found in rich woodland soil. The name comes from the fertile frond which resembles the rattles of a familiar reptile. In the "bottom", or springhead, which was the water source for the home, I rediscovered a huge, hidden patch of Netted Chain Fern (*Woodwardia areolata*), I had found last year. They like wet areas and this is a perfect place for them. The ground is spongy and I'm sinking in several places. These are not really what one thinks of when ferns come to mind. Neither was the next one I found.

Down on Granite Dome trail, near the tunnel, (a magical area, plant-wise), grows my first special fern find. Four years ago as we developed these trails I found a beautiful growth of Northern Maidenhair fern (*Adiantum pedatum*). Growing in sheltered areas and rich soil these delicate plants will last the summer then fade in the cool weather of fall. On the other side of the tunnel I see the Mountain Laurel (*Kalmia latifolia*) is just beginning to show. It looks like this will be an exceptional year for these showoffs. One last fern to show and it's fairly uncommon on our trails. Broad Beech Fern (*Thelypteris hexagonoptera*) grows, as most ferns, in moist, rich woodlands. Really nice!

April 26

I found a very common resident of woods, rocky areas, and our back yards. The Eastern Fence Lizard (*Sceloporus undulatus*) is a favorite of mine. Eating spiders, crickets, and other insects this is one animal you will want to have around the house. The males' ventral, (belly) will have two conspicuous blue patches on the outer edges. They avoid detection by hiding in plain sight, due to perfect camouflage. Their most common escape method is to retreat to the opposite side of a tree, crawling higher with each capture attempt.

May 9

Enjoying the warmth of Golden Bear Extension was one of the most recognizable snakes in South Carolina. Stretched a good five feet in the road, a Black Rat Snake (*Elaphe obsoleta obsoleta*) never moved as I approached, except to "crimp" his body, a characteristic action. This freezing habit is one reason many are hit by automobiles. Excellent climbers, you can find them in trees, after birds and their eggs, or barn and shed rafters, looking for rats and mice, their favorite food. These egg layers are solid black with a white patch under their chin that continues down the throat for several inches. Some may retain a remnant of the white banding they had as juveniles.

In the mountains Black Rat snakes can grow to eight feet. If they live that long. I picked it up and it never made any attempt to strike or bite. They do make pretty good pets too! The photo was taken at my house because it's not too safe to stand in the middle of the road trying for that perfect shot.

A final thought. In the first issue I stated that Spotted Wintergreen blooms in April. It actually blooms in June. Enjoy the photos and get out there and enjoy your trails!

Trail Journal Issue 5

May 20

This is one of the most beautiful trail years we've ever had. There's so much happening, it's hard to keep up with. Most of the spring flowers have faded, but a few stubborn ones are still there. The Mountain Laurel is spectacular! It's one of their best years ever. Catawba Rhododendron (*Rhododendron catawbiense*) is beginning to flower at the tunnel on Granite Dome trail. I mention this area so often because of its rich botanical diversity and because it's one of my favorite places. Rosebay Rhododendron (*Rhododendron maximum*) is just starting to bloom there as well. They both have many different common names. Catawba Rhododendron is sometimes called Rosebay Rhododendron. It confuses me if I don't check the scientific names. (That's why I always include the scientific name in the Trail Journal.)

A very rare tree is leafing out and looks great. Though nowhere near its former grandeur, our American Chestnut trees (*Castanea dentata*) are really special. This is as close to perfect as any tree could come. Wildlife and humans relished the large nuts, which are high in protein and oil. The wood was naturally rot-resistance making it superb for fence posts or split rails. Its wood was highly desired for making some of the finest furniture known. A fungus kills the young tree before it grows more than 20 feet or so. You'll find them on the blue trail that intersects Granite Dome trail. Very similar to chestnut leaves are the leaves of the Chestnut Oak (*Quercus prinus*). They don't have the toothed edges of the Chestnut but their shallow and tightly-spaced lobes do show a resemblance. Chestnut Oak, sometimes called Rock Oak, is a strong white wood used for furniture, railroad ties, beams and timbers for home building. It is often sold as White Oak, which is an expensive wood. Three huge examples are located on Granite Dome trail. We call them the "Three Sisters". The middle sister may not last long due to the rot that is attacking her heartwood.

May 28

Normally as May winds down, so does a familiar sound. But not this cool, wet spring. Gray Tree Frogs (*Hyla versicolor* or *Hyla chrysoscelis*), usually heard in early May, are singing as frequently now as at the first of the month. The males, which are smaller than the females, are the singers, trying to attract a mate. There are actually two different species, but the only way to tell them apart is to count their chromosomes or examine the cells of the inner eyelid. As far as I'm concerned there's just one! They seem to be able to predict when it's going to rain. I've noticed that they sing en masse just before a storm. This is the high pitched trill you hear in the trees. They are fun to catch and make good pets but they secrete an irritating fluid that will burn your eyes if you touch or rub them after handling the frogs. Believe me, I know. The best time to hunt amphibians is during a rain. Frogs, toads, and salamanders are crawling on the roads and are easy to see. A large Green Frog (*Rana clamitans*) was leaping across the road as I rode along. These are the frogs that jump into puddles, ponds and lake edges with a sharp "kwink" cry. When they are calling, it sounds like a chicken clucking, sort of.

June 11

One question I am asked frequently concerns venomous snakes. Our most common one is the Northern Copperhead (*Agkistrodon contortrix mokasen*). They grow two to three feet and can range in color from a light pinkish-brown to tan. Some individuals may have a light maroon tinge. A copper colored head and hourglass markings are their trademark. Ovoviviparous (born alive, well not technically but it serves our purpose) newborn have a yellow-tipped tail. They eat a highly varied diet, which I believe accounts for their early spring appearance and survival success. Prey includes rodents, birds, eggs, frogs, insects, and reptiles which make it fairly easy to find a meal. They are not highly venomous, but you would require quick medical attention to avoid serious complications. Wood and brush piles, rocks and other areas of cover are the best places to find them. Copperheads will usually remain motionless if you approach and bite only if they feel threatened. In 20 years of living on Pine Grove Church Road I've had only three in my yard and one in my driveway. If you do think you have them near your property I'll gladly come out and take a look. This one, by the way, was in my woodpile but I wanted you to see it.

June 21

First day of summer! This is the wettest summer I can remember. I'm way behind on my trail journals and time outside but I'll keep trying. I really like it when I get a surprise and Turkey Ridge trail provided it. At the end of the trail I picked up a mildly venomous, but absolutely harmless Southeastern Crown Snake (*Tantilla coronata*). Averaging a foot in length, they are a light tan with a whitish belly. Its head and neck are black with a light ring around the neck. Found in dry, loamy

or sandy soil, they spend most of their time underground. Insect larva and other soft invertebrates make up the bulk of their diet. They couldn't bite you if they wanted to. You probably won't find one unless you're digging in the garden.

July 11

I was outside by my fireplace chimney and heard some very loud scratching coming from the eaves of the house. It turned out the noise was from something crawling in the dry gutter. After a second or two a Broad Headed Skink (*Eumeces laticeps*), the largest lizard that lives in our area, crawled up the chimney face. These giants are light chestnut brown with a reddish head. The head is at least as wide, (or wider) as the body. The females are smaller and striped but the pattern is faint. When they are young they retain bold black and yellowish white stripes that resemble other skinks in our area. Drier and warmer habitats are preferred, along with a preference for climbing into tree cavities. Grasshoppers, spiders, and other insects make up the bulk of its diet. Some have been observed attacking wasp nests to eat the larvae. When captured they will bite and it hurts, though it's harmless. They can easily grow to twelve inches. By the way, the bricks in the chimney are an oversized type which is about one foot long. This is not on the trail but I didn't want to miss the chance to get the picture. I was forced to shoot toward the sun, which explains the quality of the photo. I have seen them on the trail, but lizards--like birds--are hard to catch on film.

July 15

On Granite Dome Trail I found the last of Robin's Plantain (*Erigeron pulchellus*). I keep confusing them with asters. Right in the way of my picture was the very common Eastern Daddy-Long-Legs (*Leiobunum* spp.). As I understand it there are so many subspecies and they're so indistinguishable from one another that it's difficult to pin down a correct name. Though technically not a spider I have always thought of them as such. Their prey consists of minute insects. The rumor that daddy-long-legs are the most "poisonous" spiders in the world is totally false.

July 16

I hope you are enjoying these trail journals. A lot of the plants, birds and other things discussed here may have faded or left our area until next season so I'm counting on you to go and see them for yourselves. Remember if you want to contact me for any reason my email is Jbreazeale@reserveatlakekeewee.com.

Trail Journal Issue 6

July 22

It appears that the rain is beginning to subside and I would expect to see the insect and spider sightings really take off. All young born this spring are beginning to mature. If you think about it, you seldom see any large grasshoppers, praying mantis, or other large insects in spring, except for those that over-wintered, laid eggs, and died. At the trail head and other open areas along Granite Dome trail I've found several butterflies. Eastern Tiger Swallowtails (*Papilio glaucus*) have been everywhere since spring. If you see a large, yellow and black striped butterfly, that's what you've found. All males are yellow, but some females can be yellow or black with dark blue wing margins. The blue "edging" you see in the photo here easily shows a female. The dark females can sometimes be confused with the Pipevine Swallowtail, (which is toxic to predators) or the Red spotted Purple butterfly. The caterpillars are large, green, and have big eyespots. Tiger Swallowtails can have several generations before cold weather kills off all but the chrysalis (cocoon), which can survive till spring.

I have been getting a face full of spider web every time I visit a trail. I feel a little guilty about destroying something that took so much work and provides food for the builder but they always bounce back. Most of the ones I encounter are in the Orb Weaver family. I found one near the lake at the end of Granite Dome trail. The Triangulate Orb Weaver (*Verrucosa arenata*) is a colorful insect eater that is fairly common. I put it on a stick so I could get a clear picture, which shows it eating its web. This is a good source of protein and many spiders take advantage of this each morning. After the spider has built up enough energy by consuming her prey, which is small insects, she will lay eggs in a pouch, or egg case, made of silk. The case will be constructed in a sheltered spot to protect the eggs. The silk will also insulate the eggs from very low temperatures. As the air warms in the spring the eggs develop and the young spiders emerge ready to fend for themselves.

August 13

My grandmother taught me that if you miss the early morning you miss the best part of the day. I am a night owl but I do love the woods at sunrise. If you check the streetlights or any floodlights at this early hour you can find some amazing natural treasures! I found a male Imperial Moth (*Eacles imperialis*) on the lamppost near Turkey Ridge Park. Had it been a female it would have had more yellow over most of the wings. If you find a green, hot dog sized caterpillar covered with

white hairs it's most likely this moth. You probably won't see the cocoon stage unless you dig one up or uncover one in the leaf litter. They emerge in spring, 4 to 5 inches in wingspan. Look for them near bright lights at night.

I wanted to see what fall flowers had appeared in the open area on Granite Dome Trail. This was an old logging road that receives a lot of sun all day. Many flowers require this. An old favorite of mine is Queen Anne's Lace (*Daucus carota*). Sometimes called wild carrot, its roots are edible, but tough, stringy, and not too tasty. They are, however, a good source of vitamins, particularly vitamin A. The carrot we eat was developed from Queen Anne's Lace. It actually comes from Europe and it's naturalized all over the southeast. You can find it in open or disturbed areas, such as roadsides and abandoned fields. If you look closely you will see a fly in the upper left corner taking off.

In this same area, off the trail, at the edge of the woods you can find something we don't want to see. Poison Ivy (*Toxicodendron radicans*) is common here but has been removed from our trails. Poison Oak (*Toxicodendron diversilobum*) is a shrub form of Poison Ivy. While I was in California I traveled to a wildlife preserve to see Elephant Seals. The path to the beach had 8 to 10 walls of some plant that formed a thick hedge. On closer inspection, (but not too close, thank goodness), I discovered it was the west coast version of Poison Oak. Ours is not that big but still as troublesome. The oil of the plant contains a chemical called urushiol. This is the trouble-maker. Please be careful! Though we have worked very hard to eliminate it from the trails, there are areas just off the trail system where it is abundant. As fall approaches it changes to a rich red that is still dangerous to touch. There is so much information to share I have included some sites that you may find helpful. WWW.gpnc.org/poison.htm has good photos of the vines that climb trees. A good site for prevention and treatment is WWW.fda.gov/fdac/features/796_ivy.aspx.

August 20

With all of the rain this summer there has been a bumper crop of fungi, (ok, mushrooms), to see. We have a lot of different kinds at The Reserve but they can easily go unnoticed. Turtles and other animals eat them, even the very poisonous ones. The delicate structure of some and short life of others means they won't last long. And several are very small, but still beautiful. A word of caution; never eat any wild mushrooms unless you are an expert or with one you trust. I love mushrooms but I'm not qualified to make that kind of decision. Even though I know Red Chanterelle (*Cantharellus cinnabarinus*) is edible I would pass on putting it on my table. It has a tasteless reputation. Look for these small, funnel-shaped mushrooms in open hardwood areas. They can come in large clusters. Its pale orange cousin, Chanterelle (*Cantharellus cibarius*) is larger, up to 6 inches across, and considered prime table fare. They grow in mixed hardwood/pine woods.

August 27

This morning I had the privilege to lead 20+ of our youngest members and their parents on a nature scavenger hunt at Turkey Ridge Park. I was so pleased with the energy and enthusiasm they all had. We found turtle shells, snake skins, bugs, spiders, flowers, seeds, cones, well, you get the idea. I had a cage of crickets at the lake so the kids could feed the fish. But I think they were more fascinated just to hold the crickets than throwing them to the fish. When we got back to the park they were still enthusiastic but with less energy. We walked a long way, but they did great! Prizes were awarded to all with the winners of the hunt getting first choice.

Later that day I took a picture of a flower that is seen everywhere this time of year. Rosinweed (*Silphium dentatum*) is noticed more when it is not in flower. During most of the year the leaves are the real show. Large, one foot or more, and deeply lobed, the leaves have dark maroon or red veins running throughout. Some folks have nicknamed it "woodland rhubarb". The plants seem finicky about flowering. Some will put out the showy, 4 to 5 foot tall; (sometimes 10 feet!) stalk with the yellow flowers blooming at different times. Others may not send up a stalk at all. I would guess it simply depends on conditions, such as age, water, and other habitat factors. Finally, I suppose this might have been included with the Poison Ivy section. Virginia Creeper (*Parthenocissus quinquefolia*) is a very common vine on our trails. It grows very well in the same spots as Poison Ivy. In the fall it turns red like Poison Ivy. There are some major differences. It has 5 leaves, instead of 3, and their edges have fine saw-like teeth. The edges of Poison Ivy are smooth, though they have shallow lobes. It is a great benefit to wildlife as a shelter and food source. I will end with a photograph of a mushroom I can't identify. I thought it was beautiful! Especially since it was less than 1 inch tall.

If you know this mushroom or have any questions, you can email me at Jbreazeale@reserveatlakekeowee.com.

Trail Journal Issue 7

Before we get to our walk I'd like to make a correction. In Trail Journal Issue 3 I stated that the bloodroot plant had a flower stalk. It is a seedpod. If you ever have a question on any of the information here feel free to contact me (Jbreazeale@reserveatlakekeowee.com) and together we'll find the answer.

Dr. Joe Culin, professor and department chair at Clemson University came to Turkey Ridge Park Saturday night for a "bug's night out". Using black lights to attract insects, Dr. Culin explained the habits, variety, and other facts about spiders, insects and other multi-legged creatures we have here. Several of the kids found spiders by "shining" the spider's eyes with flashlights. Over 50 members enjoyed the evening and the perfect weather! We plan many other events such as this so check with the clubhouse or look for information on the bulletin board at Turkey Ridge.

I wanted to check the area where the Turkey Ridge trail creek empties into the lake. There I found Cardinal Flower (*Lobelia cardinalis*) growing and showing right where it should be. Anywhere the ground is wet, such as bogs, swamps, streams or lake borders are the perfect place for them. Growing as high as six feet, these flowers, which are found statewide, bloom from July to October. The first flowers form about one-foot from the top and then progress upward. Seeds form from the lower flowers and can be collected while the upper flowers are just beginning to blossom. I collected seeds to scatter in other areas in hopes of growing some in other areas.

Leaving the lake and heading toward the second half of Turkey Ridge trail you will find a patch of vegetation that resembles a group of Yucca plants. The leaves appear twisted and wilted with hair-like fibers along their edges. In mid-summer the flower heads, atop a four-foot stalk, are powdery white. This is one of several plants commonly named Rattlesnake Master. This is *Eryngium yuccifolium*, a member of the parsley family. *Yuccifolium* means to look like a yucca. The common name indicates that it was used as a cure for snakebite, but it was also thought to cure many other ailments as well.

September 10 - 26

At this time of year several plants advertise that they have free fruit for the taking. The bright red berries of these plants declare their presence which invites birds and other animals to eat the fruits, fly away, digest the material, eliminate the seeds, and thus spread the plants. Jack-In-The-Pulpit (*Arisaema triphyllum*) grows in rich, damp, shaded woods. In spring it produces an unusual flower which will form a large seed head in the fall. Two to three seeds are contained in each fruit. The flower stalk will collapse under the weight of the seeds and the berries will develop in the moist soil. Two of the largest I've seen are on Turkey Ridge trail. Another plant that wants its seeds noticed is the plentiful Strawberry Bush (*Euonymus americanus*). Also found in shaded woodlands this small shrub is rarely noticed until it "blooms". As summer progresses a small, bumpy seedpod begins to develop. At first it has the appearance of an unripe strawberry. But as summer wears on it "ripens" into a rich red. This is where it gets its common name. By late summer the pod has opened to reveal one to five bright, shiny, red seeds just waiting for turkey, thrushes, warblers, and others to feed and disseminate the seeds away from the parent plant. *As pretty as they are, the seeds are dangerous to consume.* Though wildlife shows no ill effects, diarrhea and heart problems, including cardiac arrest can occur if ingested by humans. Deer love the twigs so much that the plant seldom reaches its 10 foot height. These are very common and found on all of the trails. Some call it "Hearts abursting with love". I'll stick with Strawberry Bush.

A most familiar berry is the fruit of my favorite tree, the Flowering Dogwood (*Cornus florida*). Northern Cardinals, woodpeckers, robins, and even fox and deer enjoy the berries. To see and read more about the Dogwood, visit Trail Journal Issue 3. The last red berry is one that is usually missed because of the niche it fills. Partridgeberry (*Mitchella repens*) is the only berry mentioned here that is safe for humans to eat. I have never tried it, but it is reputed to be fairly bland. The single berries begin as white flowers in May to June and begin to show in fall and remain all winter, unless eaten by alert birds and mammals. The leaves were used by Native Americans and early settlers to brew a "healing" tea for childbirth pain and other related problems. It grows much like a vine and is an attractive ground cover. There is a nice example hanging off the rock above the cave on Granite Dome trail and a picture of it is in Trail Journal Issue 1.

October 1

"The Reptiles of The Reserve" was the topic of our latest lecture held at Turkey Ridge Park. I was privileged to lead the discussion and was so pleased with the questions and knowledge of our members. And I've said it before: the kids that

attend these activities are some of the most well behaved I've ever met. Smart too! They added to the meeting with great questions, stories, and discussion. It just proves again that Reserve folks are the nicest anywhere around. Having studied snakes for as many years as I have it makes me wonder how in the world the Northern Brown Snake (*Storeria dekayi dekayi*), a completely harmless snake, could be confused with the venomous Copperhead. Many in our area do make this mistake. Perhaps it's the fact that they're sometimes both a shade of brown. The background colors range from brown to gray. Two lines of dark brown or black dots run down the back. In some individuals the dots will run together and appear as stripes. When confronted they will sometimes "puff" up and make their body look larger. They may even strike but can do no damage. They eat earthworms, slugs, and other soft-bodied larvae. When they are born there is no pattern and a light cream-colored band circles the neck. The length of adults is about 18 inches. I placed the Northern Copperhead here so you can compare them for yourself. Trail Journal Issue 5 has information and another picture of a Copperhead.

Since this is the time of year Timber Rattlesnakes (*Crotalus horridus horridus*) are most likely to be encountered, or run over, I decided to include a fact or two about them. In my twenty plus years of living here I'm amazed how few of these animals I've encountered. I've seen a half dozen or so, dead on Pine Grove Church Road, one small one on my driveway and three in my yard. On Reserve property I've seen only one. I caught it, by the way. They occur in greater numbers north of Highway 11. Most in our area have a light gray background and a cinnamon stripe down the center of the back. Chevron-shaped bands run down the body. They can reach six feet but three to four feet is more common. They eat rodents, small rabbits, and sometimes birds. You can find them in wooded areas, especially where there are rocky outcrops. They do not thrive around inhabited areas so your chances of seeing one are slim. This one has a pattern very typical of ones in our area.

Lastly, I thought you would like to see a new addition to my collection. This is the last Rough Green Snake (*Ophedrys aestivus*) to hatch from a clutch of four. At birth they are about four inches long and less than one half the diameter of a pencil. Found in shrubs and dense growth, they hunt for spiders, crickets, and other insects. While adults grow to nearly three feet their body is very slender. As they climb through vines or branches their bodies sway as if they are moving in the wind. Just another scheme to "sell" the camouflage. I most often see these in late summer and fall. Nervous and hard to feed makes this inoffensive snake a poor choice as a pet.

What a wonderful fall we're having. I hope you'll get out and see the leaves changing to their true colors (I'll explain that one next time). Two local events are well worth checking out. Every third Saturday of the month, Meece Mill opens for food and atmosphere. Once a gristmill, it has been converted to a restaurant and gift shop. Located on Twelve Mile Creek, the water and unfinished wood interior make for a trip back to a different time. Hagood Mill, also open on the third Saturday of the month, has a working overshot waterwheel that grinds corn and wheat. It is one of the oldest gristmills still operating in South Carolina. I soon hope to smell the aroma of hardwood smoke in the cold air as fall gives way to the coming of winter. In any season there is much to see on the trails. With the falling of the leaves you get a different perspective of the woods and trails. I can't wait to try for some snow pictures! Enjoy your trails!

Trail Journal Issue 8

Christmas, very wet and cold weather and an oldest daughter's wedding are my excuses for the delay of this journal. The oncoming spring will change things around here before you know it. With our first year's journals behind us I am going to attempt to issue shorter entries more often. That way my observations will be more timely and helpful.

January 7

All of our Christmas decorations come down on the day after but there are still some left in the woods. American Holly (*Ilex opaca*) may still have some of its red drupes, what I call berries, though most may have been eaten. Birds, deer, rodents, fox, even turtles, if they can get them, will eat these and then disperse the undigested "seeds." There are male and female trees and only the females bear the desired berries. If you have these prickly leaved trees on your lot with no berries you may need a male (or female) tree in order to cross-pollinate. The male flowers come in clusters and the females have solitary blooms that have a very pleasant smell.

January 16

It's the perfect time of year to find little treasures when the leaves are down and the shrubs and grasses are bare. Snagged in the crook of some fallen branches of a pine is the egg case of a Chinese Praying Mantis (*Tenodera aridifolia sinensis*). This is the large, 4 to 6 inch mantis that was imported to help control certain insect pests. Our native Carolina Mantis (*Stagmomantis carolina*) is the state insect and only 2, maybe 3 inches in length. The young will hatch after a prolonged

period of warmer weather. Tiny nymphs (exact copies of the parents, only smaller) will rain out of the egg case. They are barely a quarter inch and very vulnerable. You probably won't spot one until mid or late summer.

I walked down to a stretch of trail that I don't really think is visited too often. The last leg of Granite Dome trail just before going under the tunnel is a wonderful place. It was there I identified and labeled my first tree on our trail system, the Fraser Magnolia (*Magnolia fraseri*). It is sometimes called Umbrella Magnolia because of the leaf structure and its resemblance to the ribs of an umbrella. The seed pod, or fruit, is nearly identical to that of the familiar Southern Magnolia, grown all over the south. The seeds are few in number and are consumed quickly by birds and other animals. They have large, white flowers that are very much like our familiar Southern Magnolias. If they receive enough sun they will bloom in April. I moved up the trail toward what will soon be our wildflower area and found a good example of Virginia Pine (*Pinus virginiana*). A reddish bark and 2 to 3 inch long needles in pairs is the best key to the identification of this very common tree. Unfortunately they are not very attractive or commercially useful. Pulpwood, mulch, and some limited lumber are about the only uses we have for it. It is one of the first plants to move into a burned or disturbed area and provides pine seeds, and good nesting cover. So they do play an important role even if some of us consider them an "ugly duckling".

February 18

A cold walk down to the lake revealed another local resident had also made a visit to the muddy flats at the bottom of Turkey Ridge trail. At the lake's edge a raccoon (*Procyon lotor*) left its paw prints in the mud. I started to write "handprints" because the similarities of their paws to our hands. Raccoons are nocturnal and omnivorous. They will eat nearly any kind of fruit, nut, and vegetable, especially corn. They are not the farmer's friend! They will also consume roots and other plant material they find in the woods. Small animals such as frogs, crayfish, insects, and mussels make up a large part of their protein diet. In turn they are eaten by coyotes, and large owls and hawks. As cute as they look, never approach a wild raccoon! If you see one during the day it could be a sign it is sick since they prefer to move about at night. There is evidence they had a meal here. The mussels shown here seem to be fairly abundant but most are threatened or endangered. Why should we care? Mussels are very important in filtering the impurities from water. They always improve the quality of the water in which they live. These, however, became a late night snack for our raccoon. Now that the weather is warmer and drier I hope to find more natural treasures for you. Look for a new journal issue every 2 to 3 weeks. Happy hiking!

Trail Journal Issue 9

If you love wildflowers then stop reading this and head to the trails, (well, you can finish this issue but then go)! There are some of the most beautiful flowers to be seen blooming now. It has always seemed to me that the most unusual or interesting flowers last only a few weeks, if that long. Perhaps it's this exclusiveness...and that I will have to wait another year...that makes them so special. I hope you have a bird feeder up. This appears to be a great bird year!

March 15

The Red Maple (*Acer rubrum*) earned its name due to a peculiar characteristic it has. At some time during each season of the year there is some part of the tree that contains the color red. In the winter the red flowers emerge. It is, however, very late winter. I'm embarrassed to say that I missed the opportunity to photograph them. A good example of waiting too long! In spring the red fruit or winged seeds appear. As the season progresses, I'll show you the red of summer and fall.

March 30

Yellow Poplar (*Liriodendron tulipifera*) is one of the first trees to "leaf out" in our area. This is among the easiest trees to identify due to its smooth bark and almost perfectly straight and round trunk. Of course, as I write this I remember the huge example at the end of Granite Dome Trail as you take the steep walk down to the lake. The deeply furrowed bark on this "old soldier" is similar to that of Chestnut Oak or old Sourwood. The shape of the leaves looks a little like the shape of a tulip, hence the nicknames, tuliptree or tulip-poplar. A pale yellow and orange flower blooms in spring that produces an abundance of seeds, which birds and squirrels relish. A useful wood, it was easily carved into items such as dough bowls, shovels, and other tools. Native Americans and early settlers would take an appropriate size log and carve, chisel, and burn out portions to fashion a canoe. Today it is used for furniture and veneer. These giants, growing more than 100 feet tall and over 3 feet in diameter, are common throughout our woods. You can't miss them!

April 10

Birds are out in full force. One I was pleased to see was the Chipping Sparrow (*Spizella passerina*). This is a "friendly"

bird and easy to observe. Though they can be seen year-round they are most common here spring to fall. Look for the rust-colored cap right on top of its head. No other sparrow has such a mark. You can attract them to a feeder with small seeds such as millet or black oil sunflower seeds. It is a native sparrow, unlike the introduced European species that have played havoc with our American birds and their habitats.

April 15

The leaves are appearing everywhere! Not as common as some of our oaks is the Northern Red Oak (*Quercus rubra*). It is the most northern ranging oak east of the Mississippi. It is highly regarded as a lumber source for flooring, furniture, firewood, and many other uses. Unlike other fast growing trees, Northern Red Oaks are strong and can take the abuse of poor conditions and pollution. This makes them an ideal choice for large, urban areas.

May 13

Some of the most common trees are completely filled out. When I first started identifying the trees and plants on the trails the hickories gave me the most trouble. Nearly all of the ones on or very close to the trail paths are Mockernut Hickory (*Carya tomentosa*). The other species in abundance here is the Pignut Hickory (*Carya glabra*). There are no good examples near the trails, only a few, scraggly saplings. Mockernut varieties have 7 to 9 leaflets on their compound leaves. Pignut versions have 5 to 7 leaflets. It is most common to see 7 on both. The easiest way to tell them apart is to feel the bottom, or underside of the leaf stem. If it is fuzzy or hairy, it's a Mockernut. A smooth surface tells you it's a Pignut Hickory. You can see evidence left by squirrels as they have opened and consumed the nut inside. Because it can withstand shock it is mainly used for baseball bats, tool handles, and flooring. As a source of firewood and charcoal, it can't be beat. Southern farms and homesteads used it to smoke hams and other meat for flavor and preservation.

May 27

Sweetgum (*Liquidambar styraciflua*) trees are a curse to some and blessing to others. And during the same time of year as well. In the fall the seedpods, or gum balls as some call them, fall by the thousands. These are the plague of those trying to keep their lawns perfect. But the spectrum of fall color is unmatched by any other tree! Just my opinion, of course. The leaves resemble maple leaves except they have 5, sometimes 7, pointed lobes. The bark is deeply furrowed and spongy. A very important hardwood, used for furniture, cabinets, barrels, plywood, and veneers. The sap was used not only as a gum for chewing but medicinally as well.

I hope you will enjoy the trails and park. The more you learn about the natural history of our area the more you will appreciate it. It is a great resource and it's all yours. Remember the old adage to leave an area in the same condition or better than you found it! Have fun!

Trail Journal Issue 10

June 1

Along Granite Dome Trail, near the area that has been widened, in the loose soil, I found one of the snakes I unscientifically place in a group I call "ground snakes". The Red-bellied snake (*Storeia occipitomaculata*) is seldom seen because its primary habitat is under leaf litter and loose soil. There are two color phases: dark grey and light brown. You may be able to detect two faint stripes running down the back. The belly on both is a deep red or reddish-orange. They also have dark markings on the top of the head with a light band on the neck. A very small snake, it may reach 8" in length, but will be much smaller than a pencil in diameter. Soft-bodied insects, their larvae, and earthworms comprise the bulk of their diet. I took this snake home to photograph it with plans to release it later. Was I surprised when I found five newborn Red-bellies in the cage! I took their picture beside a dime for scale and released them a day later. The babies are just too small to feed. What special animals!

June 9

Along the dry, sunny roadsides where the trails cross I'm seeing one of my favorite flowers. Bright orange flowers are uncommon so this makes Butterfly Weed (*Asclepias tuberosa*) an early summer treasure. They bloom in June and July, but I've seen them in May and August. Its name is no lie, as most butterflies love it. I grew up calling it "chigger weed" and believed it harbored these dreaded creatures. Actually they don't attract chiggers but grow in areas of high grass and shrubs that abound with these parasites. Growing to two feet, this perennial member of the milkweed family has been hybridized to bloom in several different colors.

June 21

It's the first day of summer and the longest day of the year! We have had nice weather though it's been dry. Mullein (*Verbascum thapsus*) is growing at the old home place behind Turkey Ridge Park and in the open stretch on Granite Dome Trail. It prefers open sunny areas and can grow seven feet tall. Flowering from June to September, this naturalized biennial is common throughout the United States. And this native of Asia has been used for thousands of years in any number of ways. Strip the leaves from the stem, dip in tallow and you have a torch. Stuff the leaves in your shoes if your soles are thin or your feet cold. Women rubbed the leaves on their cheeks, in place of rouge, for rosy cheeks and used the yellow flowers to make a dye to color their hair. Some believed smoking Mullein leaves were a cure for asthma and coughs. Don't try it though! Tea was brewed from the plant to try to cure various maladies. Quite a plant!

July 6

It's getting hot! One of the coolest places, temperature and naturally speaking, is the last bit Of Granite Dome Trail. Very shady and breezy, this area has the first plant I identified. Journal Issue 8 shows a seedpod of the Fraser Magnolia (*Magnolia fraseri*). The leaf structure is unique. The flowers are similar to southern magnolia blossoms. However, I have never seen this tree bloom. You can read more about it in Issue 8.

July 13

There is a plant you can see just about anytime of year. Arrowleaf, or Heartleaf (*Hexastylis arifolia*) is a low growing perennial found in most conditions in hardwood forests. It's very hardy and looks fresh in hot summer droughts or temperatures in the teens. The flowers are seldom seen because they are usually hidden in leaf litter or other ground cover. I grew up calling this plant "little brown jug" since this describes the design and color of the flowers perfectly. Look for these beginning in March, continuing through May. If you tear the leaf a strong aroma is released. I think it smells like licorice. The roots were used by members of the Catawba tribe to treat heart pains. In drier areas, such as the open lower section of Granite Dome Trail, you can find Wild Quinine (*Parthenium integrifolium*). Growing 2 to 4 feet, the flowers were used to cure ailments such as malaria, though it can aggravate allergies. Look for blooms in May to August.

No matter what time of year you read the trail journals you really miss out if you don't go and see for yourself. One hundred entries here can't cover what you will see on just one trip to the trails! Get out and enjoy!

Trail Journal Issue 11

Many times I'm asked to identify a snake by a description that sounds like nothing I've ever seen. Sometimes the description is just inaccurate. But other times I've found that I'm simply not thinking of all the possibilities. This snake seems to always fall in that category. Not particularly rare, but definitely uncommon, the Mole Kingsnake (*Lampropeltis calligaster*) is a treasured find! There seems to be an area in and around the Reserve entrance on highway 133 that supports a disjunctive, or isolated, population. Due to their light brown background and "coppery"-reddish diamonds running down the back many believe them to be Copperheads. Being king snakes, however, Copperheads are on their menu, along with other snakes, lizards, frogs, mice, and sometimes birds and their eggs. They grow to about 5 feet long but 3 or 4 feet is more common. They are perfectly harmless and should be protected.

I know I said that Butterfly Weed (Trail Journal 10) was my favorite flower. Well, my favorite orange flower anyway. But I forgot about one of the most beautiful of all wildflowers. The Carolina Lily (*Lilium michauxii*) is very uncommon for a number of reasons. They favor slopes, needs several hours of sun each day, well drained, but good soil, and while it does transplant, it may not bloom for a few years. Look for them to add color in late summer. The seed pods "stack" the seeds much like Pringles chips are stacked in the can. Growing up to 3 feet, they make an incredible display. Check nurseries for availability. They are tricky to grow but worth the effort.

Not so difficult to grow but as interesting is the Passion Flower (*Passiflora incarnata*) or "Maypop". At first glance it appears to resemble Clematis. Its fruit, which looks like a green hen egg, is edible but full of seeds. My mother speaks of making jelly from the fruit but I've never tried it. As with other passifloras, it is the larval food of a number of butterfly species, such as the Varigated Fritillary, Gulf Fritillary, and the Zebra Longwing, not a resident of our area. As beautiful as the flower appears, it is a source of cyanide. There exists a legend about the Passionflower similar to the Dogwood story. Each flower part symbolizes certain events or objects of Jesus' crucifixion. You can find detailed lists online. Just google "the story of the passion flower".

Sometimes I am guilty of taking for granted the simple, common "treasures" we have in our wild areas. The Two-lined

Salamander (*Eurycea bislineata wilderae*) is such a treasure. Very common, it is found in our streams, springs, and other permanently moist areas devoid of fish. They range throughout the state but are most common in our area. Light orange with two black lines run down the edges of their back with black dots and dashes running parallel with the lines. They can grow up to five inches. Fun to catch, they make poor pets due to being difficult to feed. Their main prey is small aquatic invertebrates.

Cooler weather is finally here and the leaves are showing their unmasked color. The chlorophyll, the chemical that gives plants their green color, breaks down due to shorter hours of sunlight. The real color of the leaf now shows. Oaks are mainly red, along with dogwood, and sourwood. Maples are fiery red and orange, sometimes yellow, as is sassafras, while poplar, hickories, beech and chestnut trees are all yellow. Sweetgum leaves are like a rainbow. Red, yellow, orange, even violet, not only can the tree have several different colors, but each leaf may display several colors as well.

As cold weather moves in we will see a number of changes. I hope to see several different hawks and the stargazing at the sales office will be very exciting. If you have any suggestions or “requests” on nature topics or activities email Heather Goss, director of the Community Foundation at hsgoss@reserveatlakekeowee.com or me at Jbreazeale@reserveatlakekeowee.com. 2007 is shaping up to be a great year and the trails are better than ever. See you out there!

Trail Journal Issue 12

January

The cold winter nights are the hiding place for some amazing sights, especially this year. In January the comet McNaught can be seen low in the western sky, shortly after sundown. It could be one of the brightest in the last century. Cold weather gives us a different focus. Hornet’s and bird’s nest come into view. It’s illegal to collect bird nests and may not be safe to bring a hornet nest in the house because larvae or adults may still be alive inside. Looking for different stones and geological formations makes a chilly walk more like a treasure hunt.

All the dead, brown leaves make it easy to spot a stark white deer skull. Near the bridge, on the Granite Dome trail, lay the major portion of a White-tail deer skull. As I took a closer look I noticed the gnaw marks from mice, squirrels, and other rodents. Bones and skulls provide calcium and other minerals for these creatures. Coyotes and dogs will also chew on these and this could be the reason it was simply sitting out in the open.

February

Snow! Turkey Ridge Park and the encircling trail around it is a winter wonderland! The woods take on a totally different atmosphere. With this rare treat comes soft silence that only the snow-filled woods can have. But some of the inclines were pretty slick! What a treat to have these paths so close! Deer tracks are all over the place but crow tracks outnumber them. I hope you got to go out, build a snowman, and play.

When February has warm rainstorms, it’s time to look for lots of special things. In one night I discovered some common, but seldom seen, amphibian residents of The Reserve. Near the main entrance, in the road, sat one of our larger salamanders. Heavily-bodied, blackish-blue or indigo and covered with yellow, orange, and sometimes red spots, the Spotted salamander (*Ambystoma maculatum*) grows to lengths of 6 inches or more. The rain causes them to move in great numbers at this time of year, preparing to breed. Looking for small, permanent pools or puddles which contain no fish, they will lay their eggs then disappear only to be found under stones, logs, and other objects in moist places. Prey consists of small insects, worms and other invertebrates. If you set up a woodland terrarium, you can keep spotted salamanders fairly easily. There are many books or sites online to help you with this.

While I’m trying to catch salamanders, frogs are all over the place, mainly Spring Peepers (*Hyla crucifer*). You hear these frogs singing in late winter and early spring whenever you pass any bodies of shallow water. Their name describes their call. “Millions” of peep-peep-peeps call out to let you know spring is nearly here. Small, no longer than 1 ½ inches, coppery-brown or tannish-pink, the major identifying mark is a x-shape on the center of their back. Like Spotted salamanders, they will lay eggs in shallow pools void of fish. Small insects are their main source of food. You may spot them in the spring and summer, but only during heavy rains at night.

March

March has had some really warm days. Even though amphibians like cool conditions, they are showing up in some pretty

large numbers. Our creeks are good habitats for some other interesting salamanders. Blackbelly salamanders are not very common but are found in this area. Brown or dark grey and speckled or “flecked” with very small, white spots or dots describes their pattern. But if you look at their stomach, best done through a clear jar or glass, you will see a jet black belly. 4 to 6 inches long, the tail is very short and has a sharp ridge. As other salamanders they feed on small insects. Living in or near streams, they can include aquatic insects and their larva as well. Finally, as I scurried around trying to catch all of these critters I saw one rather large frog leaping away. I was surprised to see a Wood Frog (*Rana sylvatica*). Our area is the extreme southern extent of its range. They are about 3 inches long; light brown, with a dark brown stripe from its eye to the tympanum, or eardrum. They’ll eat insects, earthworms, and any other creature small enough to swallow.

Spring has arrived! By the time you read these entries many of the described plants, animals, and other events may have withered, moved, or ended. I hope you enjoy reading about your great natural treasure you have here. But I really hope you will go and see for yourself. Several of you turned out this March and pulled, snipped, lifted, and raked to clean and beautify all of the trails. Thank you for all the hard work. Saturdays with Jeff begin in April. Wildflower walks, bird watching, cultural history of the area, and a geology hike are scheduled for each Saturday. Check your email or call the Concierge at (864) 869-2105 for events, times and locations.

Trail Journal Issue 13

It seems the spring weather is a bit backwards. February was almost summer-like. April had such a hard freeze that the South Carolina peach crop was nearly destroyed. My own peach and fig trees were hit hard too. But with the cooler spring comes different surprises. I have observed more of the cool temperature-loving animals than in previous years. Frogs, salamander, and what I call “snakes of the ground” (I’ll explain later) are out in abundance. Many hardy wildflowers are blooming as well. On April 7, Daniel Payne of Clemson University led members on a chilly, but informative walk on Old Homeplace Trail. And he knew it all! There wasn’t a plant he didn’t know or fail to point out. He had stories about all of them too. The focus of the walk was to identify and teach how to use native plants in landscaping. Needlegrass (*Nassella viridula*), in 3 to 4 feet tall clumps that spread out 2 to 3 feet, was interesting to me because I see it everywhere and was concerned that it may be an invasive plant in my yard. I found out it would, however, be a perfect addition to a natural setting. There were so many different plants at the creek we could have spent the entire day there.

Checking out the springhead at the homesite is always fun. If all conditions fall into place—temperature, humidity, moisture, to mention a few—you see wonderful things. Living in the seepages, slow muddy creeks, and other wet areas, Red Salamanders (*Pseudotriton ruder*) abound in our area. Reddish-orange with scores of black dots, they are almost a carbon copy of the Mud Salamander, except for one telltale feature. Red Salamanders have orange or yellow eyes, Mud Salamanders have brown eyes. Cool temperatures allow these 4-6 inch salamanders to remain active longer. As the temperatures rise, they seek relief under damp cover, such as rocks and logs. They eat small insect larvae, worms, and other invertebrates.

As the Passion flower plants begin to grow the larvae of the Variegated Fritillary (*Euptoieta claudia*) butterflies began appearing on this food source. They prefer open areas, such as fields, roadsides, and meadows. Normally very common, their numbers will depend on the supply of acceptable plants for caterpillars and nectar.

Granite Dome really is an undiscovered treasure of our trail system. I found some late blooming Sensitive Briar (*Schrankia uncinata*) in the open area near the end of the trail. You can play with this plant! Touch the fern-like leaves and they close by folding together. But touch carefully! Its name comes from the leaves’ sensitivity to touch, but also from the small, sharp briars or thorns that cover its stems. The male parts of the flower give its pink color. The yellow tips are the anthers, where pollen is produced. In this photograph you may see how the spent anthers have turned brown. These perennial vines grow up to 4 feet long and 2 feet high.

Wild Potato Vine (*Ipomoea pandurata*) is a beautiful “twin” of the morning glory growing in our drier, more open areas. It is white with a purple throat and has the familiar trumpet shape. The leaves are heart-shaped and the vines can grow several feet in length. The roots can be huge, 20 pounds or more! You can eat them but the large ones are bitter. These, along with morning glories, and sweet potatoes are all related.

An Important Note on Trail Maintenance:

I’m seeing more trash now than in the past. With more hikers, this is to be expected. Let’s make sure we leave your wild

areas better than we found them. Also, picking, digging, and seed collecting are not allowed on the trails. If you see plants you would like to have on your lot, please call (868-9563) or email me, Jbreazeale@reserveatlakekeowee.com. I have many legal sources of plants and seeds. Have a safe outdoor experience!

Trail Journal Issue 14

Never have I seen such a hot and dry summer! Animals are retreating to cooler and damper areas. But they can't stay there forever. Traveling through the leaf litter and under rotten wood Red-sided Flat Millipedes (*Sigmoria aberrans*) look for decomposing plant matter. Heavy rains and, oddly enough, droughts bring them to the surface. If you "upset" one, they will release an odor that resembles peaches or apricots. I understand that this chemical is a cyanide compound, which is similar to the one found in the pits of these fruits.

In spite of the heat, the muscadines (*Vitis rotundifolia*) are beginning to ripen. My grandmother and mother made the best jelly in the world with these. In this weather the fruit won't last long. Not to mention the bears, possums, birds, and other animals that love to eat them. The strong vines are often used to make wreaths and other crafts. Some can be two inches thick. I like to swing on them too! (Well, I used to swing on them.) If you want to grow and harvest these wild grapes you will need a male and female plant. But that's another story.

I love to see, and especially hear, a mimic of hornets or wasps, the Yellowjacket Hover Fly (*Milesia virginiensis*). Mimicking a yellow jacket, they can hover, as their name indicates and "buzz" in a manner one would expect from an angry bee or wasp. But they are harmless. This one is sitting on Chinese Privet (*Ligustrum sinense*), a terribly invasive shrub. It is an ugly plant with only one redeeming attribute—in spring, it has a very short-lived sweet smelling flower. But that isn't enough to keep me from wishing it out of existence.

Labeled a visitor by most literature, the Painted Lady (*Vanessa cardui*) butterfly is fairly common to our area. They appear similar to the American Painted Lady (*Vanessa virginiensis*). The Painted Lady has slightly pointed wings while the American has rounded edges. Adults will feed on nectar from several flower species, and the larva will eat leaves from thistles and hollyhock, which are plentiful here. I don't remember seeing their caterpillars, but they could be easily overlooked. I just think, with the favorable conditions that are here, these butterflies would stop, breed, and mature here. But instinct is a powerful force!

After we had a rare rain storm, I found several large, white mushrooms. Identification of mushrooms can be "iffy" so always err on the side of caution. These beauties are, I believe, *Amanitas cokeri*. Amanitas is a large genus that contains several poisonous species that closely resemble each other. You can find these in the dryer areas of the trail system, but, ironically only when there is sufficient moisture. Never eat wild mushrooms and wash your hands if you touch them! My wife calls this pair her "salt and pepper shakers."

Showy, red fruit is the easiest way to identify Smooth Sumac (*Rhus glabra*). Not to be confused with the very toxic Poison Sumac (*Toxicodendron vernix*), parts of the Smooth Sumac are even edible. Young shoots or sprouts can be eaten raw and the "berries" can be chewed for a sour taste or steeped in water to make a lemonade-type tea. They are hardy plants, tolerate of dry, poor soil, possibly growing to 20 feet. But I've never seen one that tall. They are worth saving if possible.

Make sure to check your calendar for all our fall and winter events. I hope to see you there and on the trails!

Trail Journal Issue 15

Thanks to the cold and frost occurring, it has killed the kudzu and ragweed! I looked forward to the rich smell of burning oak and hickory from my fireplace during those cold snaps.

I guess you suppose it's time to relax and forget about nature for now, right? Nothing could be further from the truth. We had a wonderful and much needed rain and it seemed to "wake up" some interesting little treasures. I first thought this was the Carolina Wolf Spider (*Hogna carolinensis*) the largest wolf spider in the U.S. It is also our state spider! It isn't. This is *Hogna georgicola*. I searched all the literature and internet for a common name but found none. It is a member of the wolf spider family, however. This .75 to 1 inch ground dweller feeds on any suitability sized insect. They make good pets but may live only 2 or 3 years. While they are not dangerous to people, those folks who may be allergic to the venom

should use extra care around them. By the way, spiders are measured by body length. It's the length of a wolf spider's legs that really makes this particular spider impressive.

I don't know if you've ever tried to eat a persimmon before, but I know it's an experience you would never forget! Persimmon Trees (*Diospyros virginiana*) are medium sized trees, 40 to 70 feet, with a deep, furrowed, cubed-shaped bark. One of these trees can be found on Granite Done trail about 20-30 yards from the parking lot. I have never seen fruit on this tree, so it is probably a male persimmon tree. I usually see the one-inch fruits on the smaller, 10 to 15 foot trees. Because the wood is able to withstand great shock it was valuable for the making of golf club heads and shuttles on textile looms. Like Dogwood, it has little commercial value today. Any animal that has the least interest in fruit or plant material as food loves persimmons. Raccoons, birds, rodents, bears, and anything else that can reach them will eat them, people included! But, you better be patient! Conventional wisdom says they are only fit to eat after the first frost. It better be a hard frost. I've had them after the first hard freeze and the tannin in them almost gave my lips a permanent pucker. They were an important food source for Native Americans.

Bagworms are the caterpillar or larval stage of the rarely seen Evergreen Bagworm Moth (*Thyridopteryx ephemeraeformis*). In this area they are found most commonly on red cedars and junipers. An elongated sack, somewhat swollen in the center, is covered with sticks, twigs, and other handy, nearby material, and held in place with silk. Housed within are the moth's eggs laid by the female from the previous season. There they will over winter, hatching in May. The larvae will venture out to consume leaves or needles on nearby trees or scrubs. The caterpillar will construct a "bag" around its lower body, expanding it as it grows. Finally, it will seal itself inside to complete its metamorphosis into an adult. Males will emerge and seek females. The female, remaining in the bag, will release a pheromone that will attract a mate. After mating the flightless female will lay hundreds of eggs in the bag and then drop to the ground to die. While some infestations of these caterpillars can defoliate trees and scrubs, I've never seen any problems caused by them.

Come see us at the Hill House, new home of the Foundation and your developing nature center. And get out there and enjoy your trails. They've never been better!

Trail Journal Issue 16

I believe the cold weather is behind us, despite the nighttime temperatures dipping the 40's. The warm days have stirred some of my favorite things. Wildflowers, insects, snakes, and lizards spell heaven on earth for me. And I've seen them all! One of the first snakes you'll spot in spring is the Northern Black Racer (*Coluber constrictor*). Often confused with the larger Black Rat Snake (*Elaphe obsoleta obsoleta*, trail issue #4) this racer reaches a maximum average length of about four feet. Black Rat Snakes can grow to over eight feet. Slender, smooth, and bluish-black, with a patch of white on its chin and inch or two down the throat describes this very common animal. One reason they are so abundant is due to their highly varied diet. With small rats, mice, birds and their eggs, frogs, lizards, and salamanders on the menu finding a meal is almost guaranteed. Despite their scientific name, they do not constrict their prey. Instead it holds down potential meals with a loop of their body and swallows it alive. Newborns' patterns are sharply blotched, but this fades to the satiny black of the adults. They prefer warm, dry areas, such as pine and upland woods. This one is pictured on Turkey Ridge Trail. High strung and aggressive, they strike when cornered and make poor pets.

If you revisit trail issue #5 you will see the male Broad-headed Skink (*Eumeces laticeps*). This is our largest skink, nearly a foot long. During the breeding season the male's head turns red. This is the smaller female. They retain the striped pattern that males lose as they mature. You may be able to see where the tail has been injured and grown back. Like the racers, Broad-headed skinks seek warm, dry hardwood habitats. They eat all suitable sized insects and have been observed tearing into paper wasp nests for the wasp larva. The stings don't seem to bother them. They make a nice pet but they can really bite!

One of the wildflowers I want to see in our wildflower/ butterfly garden is Phlox. In the sunny areas around Hill House, along the roads and open areas on Turkey Ridge trail, phlox abound. The particular species we see the most is the pinkish-purple Carolina Phlox (*Phlox carolina*). You can see them blooming now until June. They may also bloom in the fall, but now is the real show. They attract the bumble bee look alike, the Snowberry Clearwing Moth (*Hemaris diffinis*). You can view a preserved specimen at the nature center at Hill House.

Southern Deerberry (*Vaccinium stamineum*), what I grew up calling mountain blueberries, are flowering now. Between now and June they will develop into a pea sized fruit that is sweet, nutritious and on every trail in our system. Bears, birds,

and many other animals will eat them so fast you may never even see any! You probably have some on your property. Depending on the amount of light they receive they can grow as tall as five feet. If you can maintain any in your landscape they make an attractive ground cover in shady areas or a shapely shrub in brighter ones.

I wait all year for wild blackberries (*Rubus fruticosus*) to bloom then fruit. This year seems to be a super one too! Everywhere, in sunny places, these thorn-laden canes are covered with snow white blossoms, growing into dense thickets that will stop all but the most determined pickers. Look for ripe fruit by mid June, if the weather cooperates. I have some of the cultivated varieties in my garden, thornless, but lacking the real flavor only the wild berries have. Maybe we could have a jelly, jam, or cobbler cook-off. I volunteer to judge! To animals this huge food source is as important as the acorn supply.

I hope you will come and visit the Hill House gallery and nature center. Don't wait to walk outside. There are new sights every day. Don't miss them!

Trail Journal Issue 17

We have so many interesting events planned for June and July I can hardly wait. Best of all you can see some samples of the featured topics simply by walking out your door and onto the trails.

There are more kinds of beetles than any other group or order of organisms. And we have our share! A seldom seen but common one is the Caterpillar Hunter or Fiery Searcher (*Calosoma scrutator*). It prefers cool, damp places on the ground under rocks, logs, leaves, bark, decomposing wood, and other debris. You may spot them climbing trees in search of their favorite prey, caterpillars. They are very beneficial, eating tent caterpillars, gypsy moth caterpillars, and other harmful caterpillars. You can increase your changes by hunting in trees infested with caterpillars at night. If you can get your hands on a good supply of caterpillars, you may be able to keep them as a pet.

“Saturdays with Jeff” started out with a bang! We had a wonderful time and large group came to Hill House to view and learn about the snakes of the Reserve. One of my favorite demonstrations is to display a Northern Copperhead along with several “look-alikes”. One whose numbers have increased in this area, for reasons I'm not entirely certain, is the Corn or Red Rat Snake (*Pantherophis guttata guttata* or *Elaphe guttata guttata* for you old timers). When put side by side with the Copperhead the difference is obvious. This popular “pet” snake is beautiful and has a highly varied pattern. I put three beside each other and all had a different appearance. The basic pattern is bright red or orange blotches on a light to dark gray background. When you turn them over you can see how they get the name “corn” snake. The check-a-board pattern is similar the pattern found on ears of Indian corn. As you travel to the piedmont and coastal plain the background becomes an orange-red and they are more colorful. They average five feet but seven foot specimens are not uncommon in lower parts of the state. At home in trees, barn rafters, and other high areas Corn Snakes can hunt and catch birds and their eggs. The most preferred prey; however, are small rats and mice. They are great animals and deserve our protection.

Our next Saturday event was a bird watching walk on Turkey Ridge trail. Turkey Ridge trail and park was named for the Wild Turkey (*Meleagris gallopavo*) hen that used the broken wing method to lure me away from her nest. This was some years ago when we were laying out the trails themselves. Even though I could hear the chicks “peeping” I couldn't see the nest. She acted this way for nearly fifty yards then flew off to return to the nest. This hen shown here was photographed at the end of Top Ridge Road. In the spring, in some of our meadow areas you may witness the males with their inflated wattles, the red area on the throat and neck, and spread tail feathers courting up to five or more females. The hens nest on the ground and the chicks or poults can leave the nest within 24 hours of hatching. If you walk the trails early in the morning you may see a “mama and her biddies”.

As a beekeeper myself I am very concerned about the problem with honey bees. Beekeepers sounded the alarm in 2006. Seemingly healthy bees were simply abandoning their hives en masse, never to return. Researchers are calling the mass disappearance Colony Collapse Disorder, and estimate that nearly one-third of all honey bee colonies in the country have vanished. Why are the bees leaving? Scientists studying the disorder believe a combination of factors could be making bees sick, including pesticide exposure, an inadequate food supply, and a new virus that targets bees' immune systems. So far it seems, South Carolina has been spared. I mention this because on our bird watching walk we discovered something very comforting, at least for me. A dead tree or snag with a baseball sized hole had a huge swarm of bees coming and going. Honeybees are one of the most studied of all insects and I could fill the journal with these facts that you may want to research yourself. Instead I'll tell you I was five feet from the bee's entrance and they were never alarmed. The tree

stands 30 or so feet from the trail and poses no threat to any hiker. But this does remind me to tell everyone that as safe as our trail system is you should always be alert to the things around you. That way you will be safe and not miss any of the treasures to be seen.

Finally, some information for all of you bear watchers. Immediately past the boat storage on Pine Grove Church Road is Rutledge Drive. The Rutledge family lives at the end of the road. In the past 6 weeks they have had 2 bears come onto their porch and basically tear through the screens. In both cases the Dept. of Natural Resources brought a bear trap and caught the bear. June 19th was the capture date for the last one. And it was huge! The picture was taken through the cage, of course, so it may not have the best quality. The ranger had told the Rutledges that the bear might not be hauled away for a few hours and they were concerned it would get too hot in the cage. The ranger told them to simply hose the bear down to cool it off and that it would actually enjoy that. They asked me if I wouldn't mind doing this for them, which I gladly did. The reason for even telling this part of the experience is to say the bear never "flinched". It was as if we were old friends. He was acclimated to humans to a degree I've never observed. Fortunately he is now in North Carolina. Check the newsletter for my section on bears or stop by Hill House and pick up a pamphlet on "living with bears".

Hives of bees, backyard bears, should I even go outside? Absolutely! I've been a next door neighbor to the Reserve property for more than 20 years. I have walked, hiked, and climbed much of it as well. In all of that time I have never come close to any situation where I felt "uncomfortable". Enjoy your trail system. It's a real treasure many of you have yet to discover!

Trail Journal Issue 18

It has been very hot and dry. Quite obvious I know, but it has its affect on the environment around us. Animals retreat to moist or cooler areas. Many plants are wilting or dying back ahead of the autumn season. So when we do get a decent rain, it brings some welcome changes. Capehart Park trail has the honor of being the most damp trail area in the system. By this I mean the soil is rich with organic matter, it's very shaded, and is most of it is in a "bottomland" location. I plan to have our mushroom walk there next year because even with very little rain, mushrooms are growing there in fairly large numbers. So on this September morning I headed for Capehart.

After most rains in this area you should see one of our more common reptiles. Found statewide, Eastern Box Turtles (*Terrapene carolina carolina*) are becoming scarce. This is due to collectors, cars, and habitat loss. These omnivores are well suited for survival in an area with many predators. First, they are able to close hinged plastron (belly) of their shell so tightly you can't force a knife between it and the carapace (top of shell). They tolerate cold well and they will eat almost any kind of fruit, plant, and animal matter, dead or alive. They can go without food for long periods and there are records of them living over 100 years! Males have a distinct depression in the plastron and red or orange eyes. Early settlers learned a hard lesson when they ate box turtles that had eaten poisonous mushrooms. Though the deadly fungus had no effect on the turtle, the poison was passed onto the consumer. They are very territorial, so if you pick one up to enjoy it really needs to be released back in the same area. I used to collect all the turtles I would find on the road in an effort to save them. I would then turn them loose in my woods. I found this is not the best idea. Now I simply set them onto the side of the road if I can. One funny characteristic about them is if they ever "overeate" or gain too much weight, as pet ones are apt to do, as they attempt to close one end of their shell their body will "squish" out the opposite end. They are very special!

Even in dry periods you can always find one of my favorite beetles. Capehart has several logs or stumps you can roll over (just be sure to replace it) to find Peg Beetles (*Odontotaenius disjunctus*). Other common names include Patent leather beetle and Betsy beetle. These are the shiny, black beetles you find under rotting pieces of wood. Adults are about 2 inches long, with long lines running down their abdomen. The large mandibles appear as if they could produce a painful bite but they are harmless. They are decomposers so they aid in the breakdown of the wood in which they live. You can find larvae and adults living together in a system of tunnels and mazes dug in the wood. Some believe they form small colonies, showing social organization, a very rare trait among beetles, but others debate this. The adults do care and feed the larvae. If you disturb them the adults may produce squeaking sounds by rubbing their wings on their abdomen or the larvae, by rubbing their hind legs against their abdomens. 14 different calls or sounds have been identified with particular behaviors including aggression and courtship.

Many folks ask me how am I able to find or see so many different things. One reason is I spend a lot of time out in these woods. And many times I'm just plain lucky. That was the case in seeing the glowworm. Glowworms are not worms at all

but the larvae of the Glowworm Beetle (Phengodidae). I found this crawling across the ground. I have to admit I've seen very few of these and know little about them. The larvae are carnivorous, eating millipedes, pill bugs, aka roly-poly, and other small invertebrates. Curling into a disc shape and "lighting up" is a defensive maneuver. The adult males, only an inch long, have very spectacular antenna designed for detecting female pheromones. Males don't live long and do not feed. Females can illuminate nearly their entire body, this is not to attract mates but for defense as with the larvae. If I can catch enough millipedes I can keep it for a pet.

Allergies, hay fever, sinuses, I seem to be suffering everything now. I used to put the blame on Goldenrod or Tall Goldenrod (*Solidago Canadensis*) but I know that dubious honor goes to now to the Ragweed group. Goldenrod is pollinated by insects and birds. Ragweed is wind pollinated and we catch the brunt of it. Tall Goldenrod can reach 6 feet, grows in full sun, and thrives in moist or dry environments. The small yellow flowers form a triangular shape at the top of a stem covered with narrow, pointed leaves. Insects love the rare gift of the autumn pollen goldenrod provides. It's like setting out bait for your insect collecting. The meadow has some small plants near the upper side if you get there before these perennials die back.

I hope you will visit Capehart Park and the beautiful waterfall, streams and trail that snakes through the woods. Visit the meadow and be a part of developing the native plant flower garden that is in its infancy. Call the Hill House to find out how you can help. The seasons are changing and there is more to see than ever before. I hope to see you out there.

Trail Journal Issue 19

One trail I haven't mentioned lately is the paved cart path trail that begins at Turkey Ridge Park. It actually overlaps 2 different trails and then forks off into a new area where no trail existed. It is an easy to moderately difficult trail. But it does have one short section that is very steep. It is like walking on a sidewalk through the woods! And it has many beautiful plants, streams, and views. So I have decided to take you on a walk.

Starting on the trail, at the parking lot, it isn't long until you find Dogwood trees, showing what's left of its red fruit. Wild Cherry and Poplar trees are bare but have beautiful and distinctive bark. As you round a curve you see huge stones and boulders on the hillside. According to Dr. Alan Weekes, a geologist who led our rock walk last year, this is a very old granite outcropping that has broken apart due to weathering. This is also the source of stone that is found in the chimney at the home site we will see in a few minutes. A very substantial bridge spans our first stream. At this writing the water is a bare trickle. The stream "heads up" or originates just a short distance upstream. As we continue we walk along the cultivated Loblolly Pines to our right. Soon the old home site comes into view. Built by Ameritus Bryant over 100 years ago, all that remains is part of the chimney and some corner stones. The spring that was the water source is only a few yards away. Take a hard right and head uphill through the pines until you leave the Old Homeplace trail. Now you will snake, (no pun intended), through and down a dry section of oaks and hickories until you near the bottom of the hill. You have left one micro-climate for another. It is cooler, shadier, and has more moisture. Step off the trail and go a short distance to your left to find Northern Maidenhair Fern. This delicate fern survives only in this kind of habitat. Back on the path we cross creek number 2. There is substantial water here which supports crayfish, snails, salamanders, and non-poisonous Northern Water Snakes. These snakes can grow up to 5 feet in length and have a pattern similar to a Copperhead. The lack of water has contributed to the reduction of their numbers. Moving on, we come to another special area. Different from most trail environments, this is an open, sunny spot. In this meadow typesetting you can find mountain mint, mullein, blackberries sunflowers, and dozens of other wildflowers. Now stalks twist up showing their dried branches and limbs. Some of the herbs will still release their scents if you crush the leaves or stems. The last bridge to cross looms ahead but no water ripples underneath, it is just too dry. But it is damp and there seem to be a million Christmas ferns lining the banks. In no time we are in dry pine woods again. But these aren't as "manicured" as some of the others we've been through. Almost to the end, there is a cultural treasure here. An old 55 gallon drum, used for making moonshine, is slowly rusting away. If we try to move it, it may crumble in our hands. There are a lot of stories in this neck of the woods about the making of "white lightening". Why, I even remember a tale about my uncle Ivory and the time he.....uh, maybe I better save that for another time. Well, we made it to the end of this unnamed trail. It ends at Placid Park I forgot to tell you the trail does not loop back. But that's alright. You will be amazed how many different things you'll see that you didn't see before. But not until you get out there and see it for yourself. Now that our walk is over I challenge you to try out this trail for yourself and see how accurately I described this very unique experience. See you out there!

Trail Journal Issue 20

I always like to walk new trails and paths. As each season changes so do the trails. Some things are covered up with leaves while others are exposed. Bird and hornet nests are showing. Views open and mountain ridges pop up. So I decided to visit a trail I haven't been on for some time. When I lead a walk on Turkey Ridge trail it usually ends where the trail crosses the road. At that point most of the hikers opt to take the faster and easier stroll up the road to the park. Doing this we ignore the second half of the trail, which is unfortunate. It has 3 easy to moderate hills to walk. So our walk will start where most others end.

There are stone steps leading to the planted Loblolly pines (*Pinus taeda*). These trees are fast growing and tolerate wet or dry habitats. Left along they can grow to heights of 100 feet. Normally these trees would be harvested now. The area would be clear-cut, bulldozed or burned over, and then replanted. This would destroy other trees that were just beginning to get a foothold. Some of the old pine stumps from years gone by still remain. A few feet up the trail you can find one with a burrow large enough for rabbits, chipmunks, or even skunks. As you continue a small Sycamore tree (*Platanus occidentalis*) appears on the left. The large leaves are all over the ground but the curling, flaky bark is a dead give-away. These thin bark giants can reach 100 feet with a 4 foot diameter. The fruit is a 1 inch ball with the nutlets, (nut-like parts of a compound fruit) forming the globe. I haven't seen any on this tree yet.

Nearing the top of the ridge you enter a clearing with several small cut pines littering the ground. I'm not sure why this area is here but it affords nature some unique opportunities. With the sunlight, grasses and other sun-loving plants thrive. A cluster of small Blackjack Oaks (*Quercus marilandica*) are stubbornly holding on to the last of their leaves. Most oaks won't drop their leaves until spring. Blackjack leaves can be over 12 inches across. Mostly used for rail road ties and firewood, they grow in poor, dry soil. Walking on we have leveled off and it is pleasantly quiet. The thick bed of pine needles underfoot muffles noise much like a blanket of snow. Understory trees, such as dogwood, hickory, sourwood, and oak will soon take over. One dogwood holds onto a few berries, most having been eaten by birds. More pine stumps are here. If you can break a piece the smell of pine rosin fills the air. Heart pine, lighter pine, fat pine, and starter pine are a few of the names given to this very combustible, long burning wood. Just the touch of a match will start it. It does smoke a lot so make sure to be prepared for that. One stump is covered with "Matchstick moss" (*Cladonia cristatella*). Lichens are actually a mutualistic association between a fungus and an alga (or a cyanobacterium). Sometimes called British Soldier Lichen, the little red "caps" supposedly resemble the red hats worn by invading British troops during the American Revolutionary war. The red hats are actually the fruiting structure of the lichen. I love that bright color in this cold weather.

Winding downhill we come out on the road for just a few feet then head down an old unused roadbed. A sharp left and we're right back in the woods. I stopped to identify a hickory tree and the fuzz or hairy texture told me it was a Mockernut Hickory (*Carya tomentosa*). The dry leaves still give off their strong scent. This wood is treasured for tool handles and seasoning meat with its aromatic smoke. Its fruit is very important food for wild hogs, squirrels and other rodents.

The trail narrows to a single file path. Along this "deer trail" several beautiful pieces of quartz are scattered. Many have large crystals. Nearing the top of a second ridge a big surprise looms ahead. A covered picnic shelter and fire pit is part of the campground area recently developed. I won't go into the details because you really need to see it for yourself. You can walk there from the park entrance or Old Homeplace trail. It is even possible to drive to the site. The entire site is on a section of a seldom used trail system. But it's not too late. Try this second half of Turkey Ridge Trail. In order to use the campsite or fire pit, you **must** call the Club Concierge for reservations and care instructions on using the site. I'll bet you can find even more treasures than I did! See you out on the trails!

Trail Journal Issue 21

January 2009

It's early in the month and I have been walking some of our least traveled trails. **Granite Dome Trail** has always been my favorite. It takes a little planning to hike this trail because it does not loop back to the trailhead. There are a few steep sections but they are short. If you need to stop and rest as you climb there are great views to sit and take in. But I won't have to worry about that because I found so much to look at I never made it past the cave. Leaving the parking area you start at the top of a granite dome. These huge outcroppings of rock were great "bubbles" of magma that never found their way to the surface – or at least not until the magma cooled, hardened, and became exposed due to weathering. Though it's bare rock it supports a myriad of plant and animal life. Stepping out onto the dome you will find that to your left are large

patches of **Reindeer Moss** (*Cladonia rangiferina*). The light, gray material covering the ground is not a moss but **lichen**, which is a combination of a fungus and an algae. Even during a drought it does well because of its ability to absorb moisture and nutrients from the air.

About halfway down the trail, the dome you come to a small “island” of soil that holds a very productive number of **Muscadine vines** (*Vitis rotundifolia*). These members of the grape family can grow over 100 feet in length and the diameter of some vines exceeds 2 inches. Wine making, jelly, pie filling, and drying are some of the ways the inch sized, purple fruits can be enjoyed. Birds, bears, raccoons, and nearly every other kind of wildlife simply eat them fresh off the vine. I have long maintained that Muscadines make the world’s finest jelly. Well, as long as my mother made it!

Further down the trail, more trees appear. Most of the trees, you will notice, are stunted due to the poor soil and lack of moisture. Many of the smaller pines are fairly old. **Virginia Pine** (*Pinus virginiana*) dominates the lower portion of the dome. They do well in poor soil but can sometimes appear “scraggly.” The pinecones may hang on the branches for years. Moving over to the right you will find where the trail enters a predominantly hardwood forest. Here are Oaks that are hard to find on any of the other trails. **Chestnut Oaks** (*Quercus prinus*) are everywhere. The acorns of Chestnut Oak are an important food for many wildlife species including deer, turkeys, squirrels, chipmunks, and mice. Chestnut Oak wood is similar to and marketed as white oak. On the larger specimens the bark is deeply fissured. Chestnut oak hybridizes with many other oak species, which sometimes drives me crazy because the trees will take on the characteristics of both parent species which can make identifying them difficult. Covering the ground around the oaks are bare sticks and twigs. These belong to one of the **blueberry varieties** (*Vaccinium vacillans*). White, urn-shaped flowers bloom on low growing bushes that bloom in April and May. When ripe, the berries are sweet but very small. Good luck finding any though; all types of wildlife will have them picked clean!

Before you know it you have arrived at the “bottom of the dome.” Here huge pieces have broken and created some interesting formations including the cave. Off to your right there are benches that overlook the area – and a great place to take a rest! Approaching the benches you will pass a **Winged Elm** (*Ulmus alata*). Its wood is very flexible and springy but is also hard and resists splitting. It is used in flooring, boxes, crates, furniture, and even hockey sticks. White-tailed deer browse it in spring when the vegetation is tender. The seeds are eaten by rodents, birds, and small mammals. Walk back to the left side and as the trail drops down you can see **Resurrection Fern** (*Polypodium polypodioides*) growing on tree trunks and rock faces. This small fern gets its name because it survives long periods of drought by curling up, turning brown, and appearing dead. Then when rain returns the fern will uncurl and become green again – It’s *resurrected!* It absorbs its nutrients from the air, and water and nutrients that collect on the outer surface to whatever it is attached.

Keep going and another bench for resting and enjoying the view is provided. A path circles the giant rock that sits right in front of you. You have reached the “cave.” There is evidence that a human presence has used the cave for shelter of some sort. Now it is a haven for wildlife, mostly **Turkey Vultures** (*Cathartes aura*). A Turkey Vulture is a bird of prey that eats dead animals or carrion. They possess an unbelievable sense of smell and will be drawn to recently deceased animals within a matter of minutes. You may startle several as you approach but they won’t hurt you. At this point I decided to head home, but I don’t feel guilty because I’ve seen something new at nearly every turn. Take the time to really see what’s out here. See you on the trails.

Beginning in February 2009, Jeff will come to your Reserve property and help identify plants and vegetation for you. Property owners can also arrange a private group hike with Jeff on The Reserve at Lake Keowee trails. If you are interested, please contact him by email directly. Jeff can be reached at: Jbreazeale@reserveatlakekeowee.com

Please remember, Jeff teaches full-time at Pickens Middle School during the school season, and availability will be limited during that time.

Trail Journal Issue 22

February 2009

The rains in the last few days are a welcome gift. Not only is the ground receiving much needed moisture but the streams and creeks are replenished as well. If this continues our frog and toad populations will be the beneficiaries. Now it is too early to find these forest floor dwellers crawling about but not too early to scout out suitable habitat. Springs and seepages

are perfect places to find amphibians. There are several such places along the Old Homeplace Trail. As I enter the trail it passes through Loblolly pines and drops quickly down to the ravine bottom. Even in hot summers it's cool and damp here.

Christmas Ferns (*Polystichum acrostichoides*) abound here. This is an evergreen fern and it is believed this quality helped give this fern its name. Early settlers would bring them in their homes during the Christmas season for decoration. Another idea is that the pinna, the little leaves of the fern, are shaped like little Christmas stockings. As with most ferns, they like cool, moist, and shaded spots. Continuing on, the walk turns into a short but steep climb. As on all the trails, but especially here, be mindful of pine needles or leaves, which can make footing a little treacherous. Cross the street and reenter the trail. Here on the bank to your left is a patch of Bracken (*Pteridium aquilinum*). Bracken is considered by some as the "weed" of the fern family. They thrive in sunny and dry locations, sending rhizomes, underground stems, in all directions. The first touch of cool weather causes them to die back to the ground. A gentle, but steady descent takes you pass many springs. This is a great spot for seeing frogs or salamanders. Finally the trail bottoms out. A bench is there for relaxed contemplation. There is also a large springhead that provides habitat for many moisture loving critters. Box turtles, birds, insects of all kinds may come to utilize the water. Several specimens of Ebony Spleenwort (*Asplenium platyneuron*) rim the spring. Ebony spleenwort looks something like a smaller, more delicate version of Christmas fern, though the two ferns are not closely related. Look for the dark brown or black stem to help identify this small fern.

A moderately steep walk will lead you through, hickories and, sourwoods and oaks. Soon you will come upon large boulders that have formed overhangs and narrow passageways. Lots of hiding places too! You may run into some Black vultures seeking shelter here as they do in the cave on Granite Dome trail. Their information is included in Journal 21. I ended my walk at "Tenagain Rock." It has a cavity one can easily crawl under. You can enter from one side and crawl out the other. But you will have to decide whether you think it's safe and adult supervision is strongly suggested! I prefer to climb up to the top. Standing up there makes me feel 10 years old again. That's how the rock got its name. Parents: watch the kids up there, it is rather high. I have spent a lot of time just sitting and staring at the lake or just lost in thought. Time is precious and I consider this time well spent. And speaking of time well spent, there is no better way to use some of that asset than to walk, enjoy, and most important, relax on your trails. I love meeting the folks out there and have had some of my best "nature" talks at these impromptu encounters. I hope to see you all there soon. Warmer weather means so many changes—don't miss them!

Trail Journal Issue 23

March 2009

Thankfully, we've had some good rains this winter. I know the creeks and streams will be flowing a little stronger. With this in mind, I've decided to walk a seldom used trail that takes advantage of one of the streams and a waterfall! It is a "spur," a nickname I've given to a trail that branches off from another trail. A spur does not loop around so a hiker will have to turn around and walk back the way they came. Though some hikers may see this as an inconvenience, I see an opportunity to view nature from different angles. Closest access to this spur is from the **Granite Dome** trailhead. Less than one half mile from the start of the trailhead hikers will see a sign that says "Waterfall" with an arrow. Follow this sign.

Trees are a main feature on the spur and two big examples come up immediately. First, you'll see the **Shortleaf Pine** (*Pinus echinata*), a very common tree in our area. It is also commercially a very valuable tree. Growing to heights of 100 feet and diameters of nearly 3 feet, it is a major source of lumber for building construction, furniture, and plywood. You may have noticed just before you reached the pine a tall, burned stump. This is also a pine tree, or it *was*, until something—probably lighting—killed and burned it. Left behind is wood that is saturated with the sap or resin all pines have. In colonial times pines were "tapped" for their sap, the main ingredient in turpentine and water-proofing for large sailing vessels. If you break or scratch the wood you will detect a "Pine-sol" aroma. This makes an unbeatable fire starter. Fat pine, pine heart, and light-er pine are some of the nicknames for this rich, combustible wood.

The path takes a short but steep dip where you pass a small **American Beech** (*Fagus grandifolia*). American Beech, 80 feet tall and 2 feet thick are thin barked, indicators of rich soil, bearers of beechnuts, an important food source for squirrels, bears, and other animals. The light tan, toothed-edged leaves will remain on the branches until new growth pushes them off.

The trail gently rises and falls as you approach a sharp right. And in this bend is a huge **Mockernut Hickory** (*Carya tomentosa*). I have, at times, confused this tree with the Pignut Hickory. However, there is an easy way to distinguish these two trees. Mockernut hickories have a fuzzy feeling when you run your fingers on the underside of the leaves. Pignuts feel smooth. This wood is held in high esteem. Furniture, tool handles, baseball bats, and veneer are just a few of the uses for this wood. It is also coveted for wood to smoke meat and firewood.

The trail continues to twist, turn, and descend. You will bottom out in a small valley with a very special stream on your left. A few yards ahead you find a rare treasure. And I do mean rare! **American Chestnut** (*Castanea dentate*) trees grow as a stunted, twisted scrub. These former giants use to grow to 100 feet and 4 feet in diameter, before the chestnut blight, a fungal disease, wiped them out. In my opinion, these trees were once one of the most important commercial trees. The rot-resistant wood was treasured for furniture, lumber for detail work, and fence posts. The fruits were an important food source for wild animals, farm animals, and people. Even the leaves were used as a source for medicine. As a result of the fungus, the trees grow only a few feet before the fungus takes over and kills it back to the roots. Then it sprouts again, only to face the same fate. There are efforts to develop a resistant strain so hopefully these trees will fill our woods again.

At this point you can turn around and follow the spur back to the main trail. You can also choose to continue on past the chestnut trees for just a few feet and turn to the left, walk down the hill and you will find the waterfall. It's small, about 6 feet high but it is a peaceful spot. The water falls over a rock and into the clear pool. It's a sound and sight you don't want to miss. Take a little extra time to enjoy this hidden oasis.

Trail Journal Issue 24

If you walk the same trail over and over, it can at first glance be boring. But if you keep your eyes open you will notice subtle changes. Since my last visit 2 months ago to the Old Homeplace trail the changes are far from subtle. Wildflowers are everywhere and are in various stages of bloom. A few are even waning. I headed out to find as many different wildflowers as I could in a single day. I planned to visit Old Homeplace trail first then Turkey Ridge trail. These are some of the flowers to look for in April:

I was anxious to see if the Bloodroot was still in bloom. **Bloodroot** (*Sanguinaria canadensis*) flowers are white, short-lived; opening during the day and closing at night. The rhizome or underground stem contains a blood-red juice once used by Native Americans to dye baskets and clothing, as well as a cure for snakebite, and even insect repellent! It is still recommended by herbalists for dental health. Look for it in rich, moist and shaded forests. In the same habitat you find **Black Cohosh** (*Cimicifuga racemosa*). This is a tall, delicate plant with many white compound flowers. The buds are tight, white, bead-like structures that open from the bottom of the stem first and then work their way up. It was used as a cure for symptoms of menopause by Native Americans. Common to our area, but rare elsewhere is **Pale Yellow Trillium** (*Trillium discolor*). It is found only in the Savannah River drainage basin. I love these short flowers! The three leaves are mottled with two or three shades of green. The three spoon-shaped petals are, as the name declares, pale yellow. As with the other flowers here, look for these in rich, moist, shaded woods.

In areas with a little more light I found **Common Blue Violets** (*Viola sororia*) [V. papilionacea]. This short, richly-green leafed plant is highly variable. There are nearly forty species of violets native to the Appalachian area and hybridization is common. You may find them growing in your lawn, where many consider them to be weeds. I wish they would take over my yard! The Pawpaw tree blossoms are just beginning to open. The maroon flowers remind me of rose buds. These small trees can be found statewide in a variety of climates and soils. The fruit, which will appear later this summer, is eaten and relished by both man and wildlife. Because efforts to cultivate Pawpaws fell short, due to sporadic growth patterns, most fruits were collected from wild plants.

As I end my hike, I think the only other wildflower I'm going to look for will be the **Pink Lady Slipper** (*Cypripedium acaule*). Not rare, but uncommon, they only grow in acid soil that contains a very specific fungi. So unless you are sure your soil contains this fungus, transplanting this orchid would be a waste of time. The pink slipper or moccasin-shaped flower sits atop a five to ten inch leafless stalk. The leaves are covered with fine white "hairs." It gives them a fuzzy appearance. As late as the 19th century it was used as a cure for a variety of ailments including headaches, insomnia, and hysteria. There are so many more flowers and plants to see in the coming months. I hope I can get out and photograph many of them. I hope that many of you will do the same!

Trail Journal Issue 25

The first wave of wildflowers is on the wane but the explosion of late spring and summer blooms has just begun. The native plant and wildflower garden in the meadow at the end of Capeheart trail is doing better than expected. At first glance, it may seem bare and empty. However, looks are very deceiving! There is plenty of room for the new additions I hope to add this year. The seeds and plants from last year, despite the drought, are thriving. The main reason is their adaptation to our climate. They are, after all, native to this area. All of the seeds and plants were collected on the Reserve property. A few were already there! **Whiteleaf Mountain Mint** (*Pycnanthemum albescens*) does well in open, sunny places. It's not blooming yet, but look for flowers beginning in June. Pinch a leaf and give it a sniff. This was the plant my grandparents had growing along the porch of their house. When company was expected the children were told to take the broom and "beat the mint." This would fill the air with that pleasant aroma. I think about my grandparents and that house every time I smell it. **Mullein** (*Verbascum thapsus*), a naturalized plant from Asia, has found its way to the meadow as well. It will bloom about the same time as the mint but the yellow flowers will last all summer on the 5 to 6 foot stalks. The leaves are fuzzy, giving it the nickname "flannel plant." Though not invasive, I don't plant any non-natives in the garden regardless of how benign they may be. This would also include flowers found in most home gardens.

I am very pleased with the success of the **Butterfly Weed** (*Asclepias tuberosa*). It can withstand heat and drought. The compact orange blossoms produce a long seedpod in late summer. Each seed has a gossamer-like parachute that will catch the wind and distribute the seeds far and wide. I counted as least 5 plants and all were doing well. Less evident are the **Carolina Lilies** (*Lilium michauxii*) I seeded. They are slow growers, not blooming until their 4th or 5th year from seed. I can't find any evidence of them yet. These lilies like areas with good drainage but a little more shade than the garden provides so I will plant the next batch along the edge of the meadow. The **Passion Flowers** (*Passiflora incarnata*) may, however, be doing a little too well! If conditions are right, these vines can overwhelm an area fairly quickly. I once had some try to take over my vegetable garden. Fortunately, they are easy to control. And nature will do its part with the Variegated Fritillary Butterfly (*Euptoieta claudia*). Its larvae feed on the leaves, keeping it in check. After the flowers are pollinated a green egg-sized seedpod develops. Animals will eat the pods then scatter the seeds by passing them through their digestive systems. If you step on one you will discover how they got the nickname, "Maypop."

As I left the meadow I stopped to take a last look at two plants that were, until this spring, absent on the trail. **Cinnamon Fern** (*Osmunda cinnamomea*) and **Netted Chain Fern** (*Woodwardia areolata*) are both ferns of wet, marshy areas, often found on lake and stream banks. While the rhizoids, the underground stems, survived the droughts of the last two years, they have kept the fern fronds from growing. Cinnamon Fern's fertile fronds are cinnamon-colored, narrow, and erect. They can reach heights up to five feet. In contrast, Netted Chain Ferns barely reach 18 inches. A large patch also grows around the spring head at the old home site near Turkey Ridge Park. Combined with the other ferns I've found here this becomes the most diverse group of ferns on our trail system. We should see how many different ferns we can find on each trail. I'll try to get a fern "scavenger hunt" together for later on this summer!

As you continue hiking the trails this spring, look for ferns where they weren't growing before, and wildflowers growing in the garden; the streams are high and everything is green and healthy! Don't miss a moment; each day brings new and exciting changes.

Trail Journal Issue 26

The recent spring rains are very welcome. Everything in nature seems to benefit. Especially appreciative are those organisms that require higher levels of moisture for reproduction and survival. I was curious to see how the life around the creeks and streams within The Reserve was faring with the increased rainfall. I chose a trip to the waterways of Turkey Ridge Trail. It would also give me a chance to see the effects of the extra water on the top of the trail ridge, a normally dry area.

As I enter the trail, I'm first struck by the lushness of the woods—everything is a rich green. I know I mention them a lot but the **Christmas Ferns** (*Polystichum acrostichoides*) are spectacular right now. **Christmas Fern** fronds are healthy and producing spores. Spores are found on the back or underside of the fertile fronds. They are a chestnut or cinnamon color and are in great abundance. The spores, which are singularly microscopic, need to fall in a moist spot in order to continue their reproductive cycle.

As the trail drops toward the lake I notice that **White-lipped Forest Snails** (*Anguispira alternate*) are everywhere. These snails are preyed on by turtles, mice, and some snakes. The snails themselves eat a variety of plants and aid in the breakdown of decomposing material. Just before I get to the lake I come to a creek with rock strewn all about the bank and bottom. This area is just perfect for flipping over rocks to find those special creepy-crawlies!

I hope to find a most common resident here. **The Northern Dusky Salamander** (*Desmognathus fuscus fuscus*) abounds in the creeks, streams, and seepages in our area. Speckled brown to tan and growing to four inches, it can be found seeking small arthropods along and in its watery habitat. Yet I couldn't find a single one! Usually I see several scurrying from under rocks and around the bottom of the stream. But I did find the **Southern Two-Lined Salamander** (*Eurycea cirrigera*). It is slightly longer than the Dusky Salamander and the pattern is very distinct. It is more terrestrial as well. You may see them crawling on wet, rainy roads, especially on warm evenings. They don't make good pets for beginners and holding either of these salamanders for even a short time can kill them because of the heat given off from a closed hand. Lifting more stones I see crayfish, really big ones, backpedal to escape a possible predator. Birds, raccoons, possums, and **Queen Snakes** (*Regina septemvittata*) relish them. It's been years since I've seen a Queen Snake. If you are near a mountain stream, creek, or river and a slender brown snake slips into the water from a low branch it is most likely the harmless Queen Snake. The belly is a cream to pale yellow with seven thin brown stripes running the length of the body. Crayfish are a favorite food. I have tried to keep Queen Snakes but in captivity they will only eat crayfish that have just molted. So you have to raise crayfish in order to keep them healthy. A serious note of caution! Always use extra care if you ever flip or turn over rocks, stumps, or other objects! Sometimes, though rarely, the inhabitants may be ones that sting or bite—so be on your toes!

Lastly, I visited the large bed of **Mayapples** (*Podophyllum peltatum*) growing beside the lake. Mayapples have umbrella-like leaves on foot-tall stems. Plants with a forked stem and two "umbrellas" produce a single flower in the fork. Bees frequently visit the flowers, as they are a very rich source of pollen. The flowers give rise to yellow fruits the size of large grapes. The ripe fruit is edible, though all other plant parts (including unripe fruit) are poisonous. The fruit is eaten by box turtles. Plants do not always bloom each year but this year's look wonderful thanks to all the rain.

The trails look vastly different from the last few years. Rain has transformed the area and brought out animals in great numbers. Don't miss a minute of it. I hope you will check your newsletter and calendar for all of our nature and cultural events. See you on the trails!

Trail Journal Issue 27 Summer 2009

With the heat of summer upon us, each Reserve trail is going through its seasonal change. This change includes the arrival of some species and the fading or disappearance of others. In the next several journals I am going to describe the trails and how they transform with each season.

With the addition of the new cart path from Turkey Ridge Park, there is now a small spur going basically unnoticed and unused. This spur is the last few hundred yards of the Granite Dome trail. Even during the drought this section seemed to stay damp, and provides a unique spot to visit. The first treasure I find is the **Northern Maidenhair Fern** (*Adiantum pedatum*). This fern stands 12 to 18 inches tall on a single black stem. It is found growing only in cool, rich soil. When there is sufficient moisture and shade they are able to withstand the heat and will grow well into autumn. It is a beautiful and delicate plant that I've seen only on this trail section and on an individual member's property but nowhere else in The Reserve.

Just a few yards up the trail, grows the first plant I identified for the trail system. It is the **Fraser Magnolia** (*Magnolia fraseri*). Growing up to 50 feet, these thin-barked trees usually grow in clusters. There are several here and more as I continue down the path. Like their "cousin" the **Southern Magnolia** (*Magnolia grandiflora*), the Fraser Magnolia has large cream to white colored flowers, though the petals are longer and more narrow. It also enjoys moist, rich soil.

Moving on through the tunnel, two special plants are waiting on the other side. **Sweet Shrub** (*Calycanthus floridus*) and **Solomon's Seal** (*Polygonatum commutatum*). Both are found by the stream which is the habitat

they favor. Although Solomon's Seal can grow in drier woodlands as well. Sweet Shrub bears maroon flowers in the spring which range in smell from a pleasant melon aroma to the stench of rotting meat. Either way both odors attract the primary pollinators, flies. If you tear a leaf or snap a twig you can smell a sweet fruity smell. Solomon's Seals' flowers aren't as showy. This native perennial is about 2-3' tall, with "skinny" bell-shaped flowers dangling under the drooping stalks. Look for flowers on both in April and May.

At this point the trail is a little over grown but still navigable. Around the next bend is a rare plant growing on the steep, rocky slopes, right where it likes to be. **Catawba Rhododendron** (*Rhododendron catawbiense*), sometimes called *Mountain Rosebay*, has just finished flowering. Rather than the white flowers of the **Great Rhododendron** (*Rhododendron Maximum*) these have purple to pale lavender-pink blooms lasting only a few short weeks. All that is here now are spent, withered blossoms. The picture of the Catawba Rhododendron is one I took of this same plant four years ago. This is the only Catawba Rhododendron I've seen on the trails, but there can be more so keep your eyes open. If you find one, let me know!

As I'm heading back I spy something flying above the pools of the stream. It is a **Common Whitetail** (*Plathemis lydia*). This is a little unusual only because this dragonfly prefers still water. I didn't observe egg-laying, but it may have been hunting for mosquitoes. If you see a dragonfly lightly "tapping" the surface of the water as it flies along you are watching the egg-laying process. I've seen this only over ponds, lakes, and even swimming pools. The pattern of this dragonfly is highly varied and that makes confident identification sometimes difficult. Since I often carry an insect net I was able to capture the dragonfly, take it home, and photograph it. It was then released unharmed. If you want to walk this trail, there is a parking area beside the tunnel at the bottom of Top Ridge Road. From there it is a very short walk to this hidden natural treasure. If you start early in the morning or later in the afternoon you can beat the heat and see parts of nature that may not be here again until next year. I hope to see you out there!

Trail Journal Issue 28 Fall 2009

It must be autumn with the "shorter" days, cooler, drier weather, and a crisp feel in the air. Besides the changes from winter to spring, the change from summer to fall is the most dramatic! This change includes the arrival of some species and the fading or disappearance of others. In the next several journals I am going to describe the trails and their relationship to the seasons. I may not get to each trail each season but each visit will be fairly representative of what is occurring on all of the trails.

In my last journal, I discussed a path that was seldom used, the "tail end" of Granite Dome trail. Another under-utilized trail is the paved cart path at Turkey Ridge Park. It is a "spur" or a trail that does not loop back. But in addition to a smooth footpath, it has some spectacular natural sights to see.

Loblolly Pines greet you as you began your walk. They drop about one third of their needles each year. They can make your footing slippery, so take care. Covering the banks of the trail, **Christmas ferns** remain green. Other ferns, such as **Northern Maidenhair**, **Silvery Glade**, **Bracken**, and **Lady Fern**, will die back until spring. The leaves of the **Flowering Dogwoods**, **Red Maples**, **Red** and **Scarlet Oaks** will turn various shades of red. **Tulip Poplar**, all **Hickories**, **American Chestnut**, and **Sassafras** change to yellow. **Sweet Gum** is a toss-up—their leaves can be yellow, brown, and even violet. Sometimes all even on the same leaf!

As the path drops to the stream you may see frogs or salamanders in the water. As the weather cools they, like the ferns, will vanish until spring. The trail continues to the old truck roadbed where the summer wildflowers flourished, but now it is changing into a giant dried arrangement. **Sunflower**, **Coreopsis**, **Mullein**, along with the small tree **Smooth Sumac** are plentiful here. Before temperatures drop too low, you may be able to find **Chinese Mantid** (*Tenodera aridifolia*) or the **Carolina Mantid** (*Stagmomantis Carolina*), our State insect. Most of us just call them praying mantis. This area is perfect for the females to lay eggs. Look for one inch brown

masses that look like the material that comes from spray foam insulation cans. They make good pets but they are short-lived. I have kept some alive through February but that is rare. **Goldenrod** (*Solidago altissima*) will still be blooming but will fade as day length shrinks. It is not the bane of our allergies, but the **Annual Ragweed** (*Ambrosia artemisiifolia*) that grows intermixed with it causes great discomfort. The first frost will kill back all of these flowers.

Moving along, you pass over a small bridge that takes you into “still” country. I don’t mean a peaceful area, though it is that. I mean moonshine, “white lightnin’ ” or “mountain dew.” The remnants of an old metal drum, most which have rusted away, can still be seen here. A small nearby stream could have provided the necessary water used to process the ‘shine. Many of us “upcountry folks” have stories or tall tales about friends and family members who might have firsthand experience with this “tonic.” You will find the end of the trail at Placid Park. Simply turn around and you will be surprised how short the walk back will be. You will also find there are many sights you missed by only walking one way. This way you have the best of both views. Lower humidity, fewer bugs, and cooler temperatures make this is a great time to get out and visit your trail system. Things will change fast— I hope to see you out there!

Trail Journal Issue 29 Spring 2010

Spring is a magical time and The Reserve trails are magical places. In the next several weeks wildflowers will bloom and fade, trees will begin to “leaf out”, insects will fill the air, and birds, frogs, and lizards will be seen in abundance.

Wildflowers are generally reliable when it comes to their blooming schedule, though climate can affect it to some degree. This journal will suggest where these jewels of the woods have been found previously. Remember, the best way to find wildflowers is to get out and walk the Reserve trails often. Many wildflowers have a short blooming period, and if you miss it – you will find others! All of the plants listed below are identified with trail markers on at least one of the trails in the Reserve system.

By mid-March **Pale Yellow Trillium** (*Trillium discolor*) are set to bloom. The Reserve at Lake Keowee is blessed to have so many of these uncommon trillium which exist only in the Savannah River drainage basin. The three leaves are mottled with two or three shades of green. The three spoon-shaped petals are as the name declares pale yellow. As with the other flowers here, look for these in rich, moist, shaded woods.

Look for **Great or Rosebay Rhododendron** (*Rhododendron maximum*) closer to April. Dogwoods (*Cornus florida*) begin to bloom in early April. There is a legend behind this beautiful tree. The wood for the cross on which Jesus was crucified was from the Dogwood. As a penalty God cursed the tree and from that time on it would never again grow large enough to be used in that manner. The petals, shaped as a cross bear the stains of His pieced hands and feet. A crown in the center is his crown of thorns.

Sensitive Briar (*Schrankia uncinata*) will flower in late spring in the more open areas of the trails. You can play with this plant! Touch the fern-like leaves and they close by folding together. But touch carefully! Its name comes from the leaves’ sensitivity to touch, but also from the small, sharp briars or thorns that cover its stems. The male parts of the flower give its pink color. The yellow tips are the anthers, where pollen is produced. These perennial vines grow up to 4 feet long and 2 feet high. Good examples of all of these plants can be found on Granite Dome Trail.

Pink Lady’s Slipper (*Cypripedium acaule*) will bloom by April, give, or take a week. There is a large patch beside the carpath on Old Homeplace trail. Not rare, but uncommon, they only grow in acid soil that contains a very specific fungi. So unless you are sure your soil contains this fungus, transplanting this orchid would be a waste of time. The pink slipper or moccasin-shaped flower sits atop a five to ten inch leafless stalk. The leaves

are covered with fine white “hairs”. It gives them a fuzzy appearance. As late as the 19th century it was used as a cure for a variety of ailments including headaches, insomnia, and hysteria.

Bloodroot (*Sanguinaria canadensis*) flowers are white, short-lived; opening during the day and closing at night. The rhizome or underground stem contains a blood-red juice once used by Native Americans to dye baskets and clothing, as a cure for snakebite, and as insect repellent. It is still recommended by herbalists for dental health. Look for it in rich, moist shaded forests.

Squaw-root (*Conopholis americana*) also called Cancer-root lacks the chlorophyll needed to make its own food. Light tan to brown, it is a parasite feeding on oak roots. The flowers will die in a month or two but the stem can last well into winter. Look for exceptional good examples of all of these flowers on Old Homeplace Trail.

On any of the trails you can find the following in profusion: The **Red Maple** (*Acer rubrum*) earned its name due to a peculiar characteristic. At some time during each season of the year there is some part of the tree that contains the color red. Dark pink to red flowers appear in late winter. In the spring the red fruit or winged seeds appear.

Christmas Ferns (*Polystichum acrostichoides*) are everywhere. Fiddleheads, the developing fronds of a fern, are replacing last year’s winter-worn leaves. **Yellow Poplar** (*Liriodendron tulipifera*) is one of the first trees to “leaf out” in our area. These are among the easiest trees to identify due to its smooth bark and almost perfectly straight and round trunk. The shapes of their leaves are similar to the shape of a tulip. This gives it the nicknames, Tulip-tree or Tulip-poplar.

Space will not allow me to mention the hundreds of flowers, trees, and animals that can only be seen at this time of year. You will have to simply discover them for yourself. I hope you will explore your trail system and find all the new wonders nature has to offer each spring.

Nature-ally yours,
Jeff Breazeale

*The Reserve at Lake Keowee Community Foundation’s Naturalist, Jeff Breazeale, is **available to visit your Reserve property** and help identify plants and vegetation for you. Property owners may also arrange a private group hike on The Reserve at Lake Keowee trails. If you are interested, please contact him by email: Jbreazeale@reservekeowee.com*

*Please check the website calendar and monthly newsletter for **Jeff’s Saturday programs at the Hill House**, and special programs throughout The Reserve property continuing through the summer.*

Please remember, Jeff teaches full-time at Pickens Middle School during the school season, and availability during that time will be limited. Beginning the week of June 8th, 2009, Jeff will be more available during the week.