A Journal of Environmental Education and Interpretation

Childhood Memories

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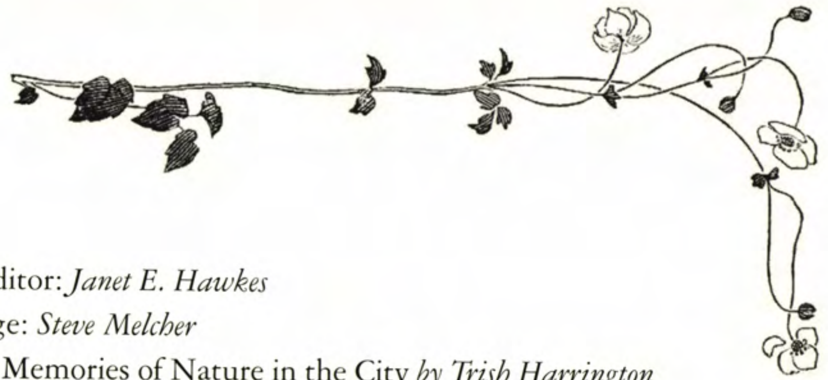

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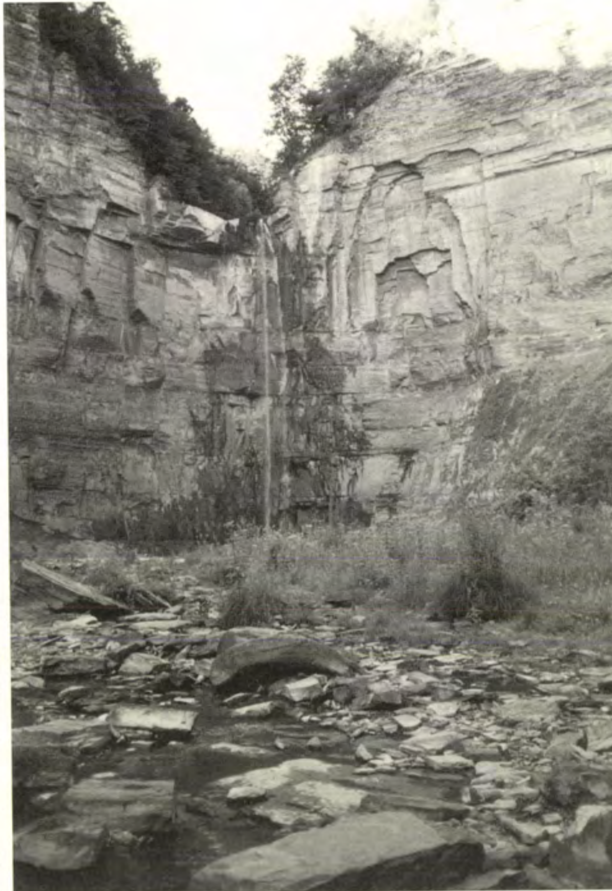
From the Guest Editor

By Janet E. Hawkes

During the time I was preparing this issue of Nature Study, I lost my father and I lost my health. One I am recovering, the other I will never recover. My childhood memories of nature always include my father. From before I can remember, I was taken outdoors on walk, hikes, and adventures by my parents, especially my Dad. I know this from the uncountable photos of me and my siblings in various outdoor venues and, after a time, from vivid memories.

From a very early age we were also told that everything in nature has a story. I often still remember the stories, while the name of a given plant or animal escapes me. You know, the plant with the blue berries in fall that has the star-shaped flower that hang down in spring and grows in rich forest detritus, or that little fish that darts around in plunge pools and flashes silver in the sun when it changes directions, of that bird that flies in an undulating wave that looks like a sine curve.



Photography by Rod Hawkes

My siblings and I were often sent outside to keep the family peace and give my mother a break. Our home had nine inhabitants and a menagerie of pets and wild visitors—creatures that our pets or we had caught, which were studied, admired, and then released. Except for my snake collection that I inadvertently let loose in the house, all wild animals were released back to nature. When sent outdoors, we were often sent on hikes with my Dad.

One of the favorite family hikes was up and back on the trail to Taughannock Falls, located ten miles from Ithaca in the Finger Lakes region of New York State. My first trips there were on my Dad's back. I most likely toddled part of the way but finished being carried. My memories are from the perspective of looking over my Dad's shoulder at the rush of water plunging 215 feet over the falls. I remember the roar the water made and being showered by mist. Even in the summer, when the falls barely flowed, there was always a mist. The frozen mist in winter scratched my face and turned my hair into a crackle of ice.

We visited the falls in every season. In spring when the water filled the valley with a muddy froth with ice rafts the size of a car. In summer when barely a whisper of water made the plunge and the pool was deep blue and green. In fall when the valley was ablaze with the bright colors of the turning trees and the water flowed clear and steady. In winter when the steely-gray cliffs were highlighted by a dusting of snow and an ice mound formed at the base of the falls, sometimes reaching over a hundred feet in height.

Photography by Rod Hawkes

I remember walking, running, skiing and even hobbling on crutches to the falls throughout my life. Today, I live near the falls and continue to visit them often. My own children, who are now young adults, tell me of their memories of walking up the trail or stopping at the overlook for a quick view of the falls.

This issue focuses on the memories of the members of ANSS and readers of Nature Study. Thank you to all for sharing your stories. If you didn't get a chance to share your story in this issue, please reflect on your own memories about connecting with nature, and take the time to share your memories with a friend or family member.

American Nature Study Society
President's Letter
Steve Melcher

I grew up in a hunting and gathering family. My mother gathered us together for meals using deft swats with her fly swatter. My father spent many a night hunting for his wayward brood last seen '"heading into the woods."

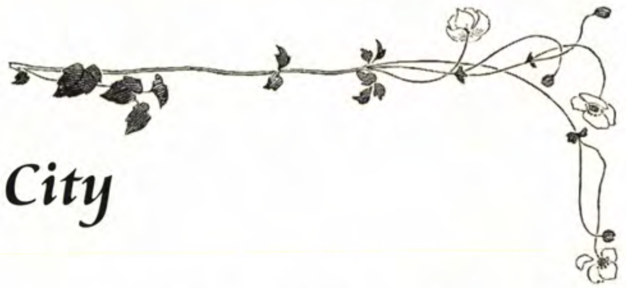
My father, an avid hunter and fisherman, introduced his sons to nature. This might be considered odd because the tradition was not handed down to him as in most families from father to son. His father was one of the original Keystone Cops; a circus clown, trampoline gymnast, and tight rope walker, star of silent screen and mall opener who was on the road most of the time and despised hunting and slept outdoors only when he had to. My father learned to hunt and fish from a neighboring farmer who taught him to load a gun as well as bait a hook.

The hunting and fishing tradition was handed down to me by my father. My brother and I had our own guns at an early age and wreaked havoc on the local wildlife shooting at anything that dared move into our path. We jockeyed for position standing shoulder to shoulder on the banks of Stoney Creek on the first day of trout season while my father untangled yet another snarl in one of his boy's fishing lines. We fished for giant carp near the sewer outfalls and let the behemoths pull our boat faster than the outboard could. We trapped for fun and profit and camped in the wilds of Canada and New Cumberland. I loved being outdoors. I had many neighborhood companions for nature forays but I preferred man's best friend as partner. My dogs Spot and later Buttons were always eager for a romp off into the woods. Even when Spot and I were both at the ripe old age of sixteen we reveled in following the tracks of ringed-necked pheasants or rabbits through the snow covered fields of neighboring farms.

My goal as a preteen was to be able to survive in the wilds if dropped anywhere in the world. By the time I was a teenager I realized the extreme audacity of such a goal and decided to narrow my survival skills to the wilds of Penn's woods. I wanted to know the names of all the plants and the habits of all the animals that resided in my neck of the woods. Identifying birds and plants and using their scientific name became important by early high school. Hunting and fishing became less important. I was evolving from hunter to observer. I remember distinctly unsuccessfully explaining to my father why I had let a large buck pass within a yard of me. I was awestruck. He was beautiful. He was a huge white tail deer with a twelve-point rack. I didn't even think of raising my gun. I just held my breath and let him pass. He turned his encumbered head towards me, brown eyes staring, wisps of steam from his nostrils. We stared at each other for what seemed minutes. He sighed a short snort as if to say "silly human," and then passed by. I let my breath out finally and shook off a chill; at the same time feeling the connection made. I had felt the exhilaration of the hunt without having to taste the venison.
I was able to find a part of hunting I liked. I don't want this letter to stray from memories of early nature study to one of anti-hunting. I still hunt. Only now I seek my prey with notebook and camera. The trophies are shown upon a silver screen. I just want to point out that most of my generation were introduced to nature through hunting or fishing. Liberty Hyde Bailey introduced nature to the farm children who grew up tilling the soil but knew little of the rest of the picture of nature. The L.L. Bean I grew up with has changed drastically. I still support state and federal conservation (hunting and fishing) programs by purchasing a Duck Stamp every year and through volunteer work. Fewer people are applying for hunting and fishing licenses here in New York State. This does not have to mean fewer folks are enjoying the outdoors. My early memories and introduction to nature were through rod and gun. My children are now growing up on a hundred acre sanctuary and will probably never know the difference between pumpkin balls and buckshot but will know the call of the red tail and the scent of a fox den. The importance lies in the introduction of nature whether with a fly rod or a spotting scope. You're reading this journal because nature is important to you and you have many special memories of times spent with nature. Please return the favor and pull someone away from the plasma screen and help him or her to create memories.

A young Steve Melcher

A LASTING LEGACY:
Memories of Nature in the City



By Trish Harrington

It began when I was very young. The first seeds were sown. I didn't know it then, but I was becoming a 'naturalist'. I think it all started while I was growing up in Philadelphia (of all places) that I discovered the natural world for the first time. I lived in typical three bedroom row home in the Olney section of the city. We had only a small plot of grass, and only one shade tree on the entire block.

My grandparents on my Dad's side lived in a house in a section of the city called "Wissahickon." Once a week, usually on Sunday, we would visit them. It was a hilly section of the city very close to the Schuylkill expressway. It was a beautiful neighborhood, with many old Victorian homes and flagstone sidewalks. My grandparent's home was a three story twin, with front and back stairways and a coal bin in the basement. I can remember the double stained glass doors in the foyer – where my sister and I used to play 'church.' The kitchen was heated by a coal cook stove – quite a fascination for me. The street was quiet and lined with old shade trees. The front porch with its wicker furniture was the place to be during those warm summer evenings. If you listened very carefully, you could hear the Wissahickon Stream, which was right down the street.

The park was accessed two ways, either by walking a block or so down where the street dead-ended, and a small trail let into the woods, or you could walk down the street adjacent to their home, and down a very steep stairway which led into the park. I preferred the former route. Often I would wander down into the woods and sit by a shallow stream to watch the water run. I would make stick dams and rafts and turn over rocks, not even knowing what I might see. My grandfather would sometimes take us for walks through the woods. He never said very much along the way, except to sometimes pretend he had heard a bear or something. I, of course, would 'freak,' but I would soon be reassured by his smile that he was kidding. The forest seemed to be a whole new world apart from the city. It was in sharp contrast to what I was used to. All too soon it would be time to scrape off the mud and return to the house.

My grandmother was a gardener. She grew perennials, roses and bulbs, and she even kept a large vegetable garden in the common plot in a vacant lot beyond their backyard. This was once part of a neighborhood "Victory Garden." It was a Sunday evening ritual to walk in the garden with my parents to enjoy the various blooms and to check out the status of the

cucumbers. To walk through the garden was to walk through the "farm" as we called it. In the front yard there was a huge rhododendron bush, which was so large and the trunk so big, my brother loved climbing on it. Near the front steps, I remember there was a small pink azalea bush my parents gave my grandmother one Mother's Day.

Birds were also welcome here. One summer, while staying at my Grandparent's house for a week, my grandmother taught me to recognize many of their backyard birds - not only by their colors, but also by their calls. My grandmother once had a robin which was trying to build a nest underneath the overhang of the porch. She prompted my grandfather to stop what he was doing to put up a nesting ledge to help out the mom. And so, they had a family of robins sharing their front porch one July. Woodpeckers were common as well. You would often hear them drumming high up in the trees. My first glimpse, however, was of one drumming on a telephone pole across the street.

From the vacant third floor of the house, you could see above the treetops a view of the city skyline and the park. Everything looked so small and the cars over on the expressway looked as if they were going very slowly. What a great place to survey the world.

My parents and my grandparents are now gone. About five years ago, before my father died, I was back in my grandparent's old neighborhood with my husband, and we swung by the old place so I could see it again. It looked so different, I had a hard time figuring out which house was theirs. But there it was, looking vacant and deserted. There was a realty sign on the front lawn. The grass was high. There was now a row of town houses behind where the vegetable garden once was. Where the cucumbers once grew was now a parking lot. They paved paradise – such is life in the big city. The stained glass windows on the front door were replaced with doors with iron bars. The rhododendron bush was gone, replaced by a broken down grape arbor. The park down the street was still untouched by development and that is good. The memories I have of my walks with my grandfather and all of the time my family spent together here will always be with me. I have kept my love of nature that first took root here. Some things will never change.

As I turned to leave, I noticed something by the stairs on the front lawn – it was a very large, very old, pink azalea bush.

Cabin on the Lake

by Cheryl A. Bowser

One summer in Maine with my grandparents
Meant the world to me.
The summer I turned thirteen years old
A woman soon to be.
The forest all around us
A lake as far as I could see.
That's where I learned that nature
Was the biggest part of me.

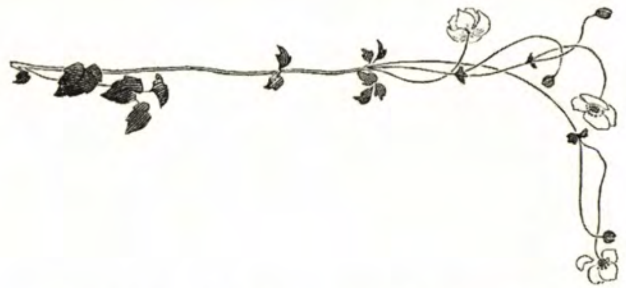
Fishing with my grandpa.
Walking in the woods.
Eating fresh picked berries.
Boy, they sure were good!

I learned so much that summer
Like a pickerel from a bass.
Pine, oak and maple trees
Wildflowers from the grass.

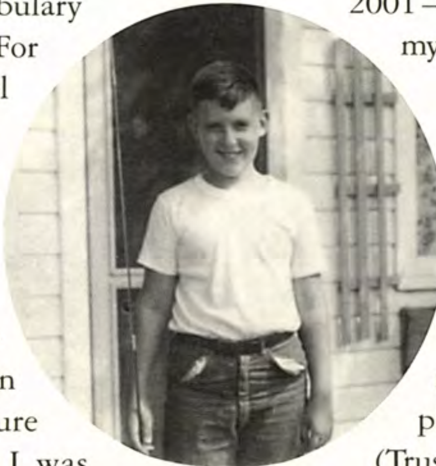
My grandparents both are gone now.
To this I must protest.
But, the summer that I spent in Maine with them
By far outweighs the rest.

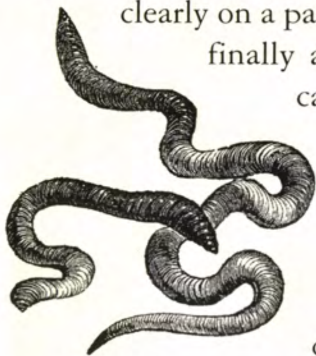
From "Bums" to Birds

by Marshal T. Case



"Bums" started my vocabulary and interest in nature study. For me, being close to ground level at age 2, earthworms on the sidewalk outside my home in Knoxville, Tennessee captured my attention. After every rain, I was looking to save the "bums" from the feet of people who passed along the sidewalk in front of my house. I'm not sure why I focused on them, but I was clearly on a path to nature study and finally a long and wonderful career in environmental education and habitat protection. By age 4, I was focused on the back yard where four properties came together and the neighbors let it all grow up into a wonderful tangle. I knew I could find lots of interesting birds and toads in that special corner. Catbirds and cardinals were favorites.





Now, thirty-eight years into a career of working with teachers and students and chartering more than twenty-five conservation non-profit organizations, I'm working hard to protect those neotropical migrant birds and as much habitat as possible. My earliest conservation success was with each earthworm I saved from human feet. In fact, I consider it a high point of my career. And, because I was always fascinated with catbirds in the back property corner in Tennessee (and later suburban Philadelphia), the bank and I bought a 92 acre farm in Vermont in the summer of 2001 – luckily, just across the street from my home.

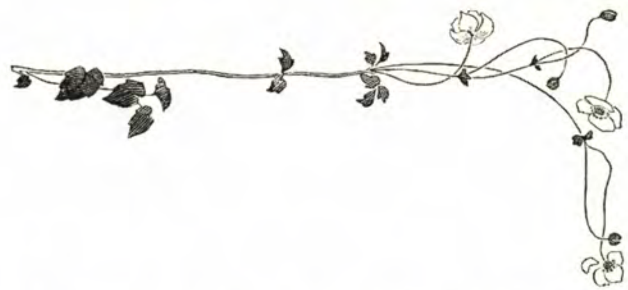
I've enjoyed Vermont, personally, for sixteen years, with a two-year break to help save cranes, working out of Wisconsin. I have a dual focus these days working to bring back the American chestnut to our eastern forests and presiding over another non-profit (Trust for Wildlife) to instruct about neotropical migrant birds while setting aside land for the northern points in the migratory cycle of so many interesting birds. My heart jumps when the bobolinks return to my hayfields and the orioles, catbirds and wood thrushes voice their presence from the hedgerows and sugar bush.

The best "things" in life are still free. Binoculars, good nature guides, and a canoe are still my personal best treasures. I still stop along the highway on rainy spring evenings to boost frogs, toads and salamanders to "the other side" and I teach my children and students that every "bum" counts.

Photos courtesy of Marshall Case

Nature Man

by Carolyn L. Constable



My Dad, Roy C. Imsick (1913-1994) had an all-encompassing love of nature. He was an amateur ornithologist and as a young man, he would go bird watching with Roger Tory Peterson. He attended the first Audubon Camp on Hog Island, Maine in 1936 with Roger Tory Peterson. When my Dad was dating my Mom (Veronica), he presented her with a pressed hepatica blossom. The Comstock *Handbook of Nature Study* was his 'bible.' His life-long work with the Boy Scouts of America saw him as a Nature Counselor forever.

Carolyn, March 18, 1945

When I came along, the first of five children, in 1944, I was exposed to the glories of nature as an infant. During WWII, my Dad was stationed in Nahant, Massechusetts. Here is a photo of me on the rocks, bird watching with my parents.

My whole childhood was immersed in nature awareness. I can vividly remember when I was eight years old getting up very early for a sunrise bird walk with my Dad. We were vacationing on Long Beach Island, New Jersey, and Dad and I decided to hike to the far end of the island. In the early 50's there were many nesting colonies of shorebirds there and the far end of the island was uninhabited. Black Skimmers were nesting and we watched these magnificent birds from a distance. Then, inadvertently, we stumbled into the nesting area of the Common Terns. The terns proceeded to dive bomb us. We had to escape by crawling on our knees. I was frightened, but will always remember the way the terns protected their young.

As a youngster I grew up in Wyndmoor, Pennsylvania, and Dad was known among the neighborhood children as the Nature Man. He was always finding snakes, bird nests, neat insects, seedpods, etc. We were real fortunate to see a Monarch butterfly migration one September morning. I'll never forget the sky darkened by thousands of butterflies. Dad also perked our interest in insects. We witnessed a cicada killer dragging a dead cicada up the silver maple tree. We also got paid one cent for every 10 Japanese beetles that we picked off the rose bushes.

My father died at age 81, but his influence lives on. For 27 years I have been active at Peace Valley Nature Center near Doylestown, PA, where, as a teacher-naturalist, I lead children to discover the joys of nature. Whether doing a stream search or an animal habitat class, hands-on nature experiences are provided for the children. Just recently a second grader remarked, "This is the best field trip I've ever been on. It's about time we had outdoor field trips." Children find beetles under the rocks,

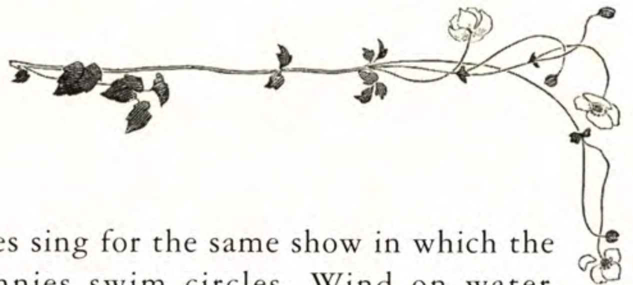
Carolyn Constable showing a grasshopper to Special Ed. students at Peace Valley Nature Center 1998

feel the soft mullein leaves, search for signs of deer, and listen to the wood thrush's flute. My own sense of wonder is enhanced as I walk with the children.

Roy Imsick's first grandson, my son Ronald Jr., is employed at Mt. Pisgah Arboretum in Eugene, Oregon. Ron is an ancient forest activist and volunteers many hours for the Oregon Natural Resources Council. He is currently involved in lynx studies and protecting lynx habitat from clear cutting. His grandfather was a big influence in his appreciation of nature. Great-grandson, Corey Thomas Constable, as the photo denotes, is on his way to becoming another "tree-hugger" and nature lover.

Corey Thomas Constable, 22 mos.

I inherited a precious gift from my Dad. Nature gives me solace, peace and a perpetual sense of wonder.



Lessons on the Dock

by Beth E. Waterhouse

Today I sit on this wood and aluminum-pole dock on a flowered cotton quilt and lean against the boat lift, yet I can easily remember when our dock was hand-made from cedar poles and pine boards and when the running thump of my tennis shoes made only a wooden sound. Our family often arrived at Thunder Lake in the dark on a Friday night. Flashlight in hand, I would race to the end of the dock and shine for crayfish or whatever small monsters lurked in the deep. The yellow beam revealed greenish water, wavering weeds, a perch or two, and the occasional crayfish skittering backwards from the light shafting into his quiet night.

Today the light is at least half of the story. As I sit watching sunfish school between the floaty weeds, the breeze on this lake causes the sunbeams to ripple underwater. Sunnies dance in blinking spotlights. I lay back, basking in the day's rays and gaze upward into the tallest branches of an 80-year old Norway pine tree near the shore. To my amazement, those towering limbs reflect the same rippling light show! Chickadees sing for the same show in which the sunnies swim circles. Wind on water, flicker for flicker, the sunlight unites us all.

Later, as I stand and bend to fold my quilt, I am jolted to see, near the reeds in the shadow of the boat, a small black and white swallow, dead and floating in the shadows. I bend closer to see this tiny bird, feathers nearly formed, eyes still sealed, probably blown out of the nest without knowing the light of day. I squat down, full of questions. Would the mother bird count and miss her young? Is there a chirrup for grief? Will there be grief in the universe over this hatchling, other than mine? Its feathers already define shape and species, yet its life ended before it even saw its world, let alone soared in the evening thermals over blue water. What is an *early* death? Who are we to define such a thing -- its bones will now certainly join with soil and complete their own cycle. I stand and step gently off the dock boards, leaving the tiny nestling afloat. A thick cumulus cloud passes between me and the sun, I lift my eyes to the light.

Childhood Memories of Nature

By Natalie Sluzar

Hazel's Room

How powerful the forceful winds, how mountainous and mighty, telling me I cannot sleep, I must pay attention. And oh, what wonders I saw.

A morning car trip stalled by enormous tree trunks, like pick-up-sticks scattered on the country road. Tree tops bigger than houses, rustling on the ground like fish out of water. These things speak of magic to a child, not destruction.

And when I walked the woods there was more to ignite my imagination.

A community of tiny houses sprouted overnight. Attached to the foot of each toppled tree a pup tent formed of big roots on one side and smaller roots and ground cover on the other. Inside, inviting little hollows for elves and animals and exploring little girls. A soft place to spread a blanket and dream about fairies and magical woodland creatures. My own little forest room.

A Bumper Crop of Milkweed

Even on village streets away from field and stream, white fluff floated in the air everywhere as if winter was trying to snow itself in with airy feathers of flakes. And all those country roadside ditches level with white, like clouds resting after a day of treading air and then suddenly called to action when a car passed and raised a wake of fluff like a speed boat on water.

Such a marvelous display of abundance.

Ice Storm

I looked out my window and where once my favorite multiple birch rose high against the sky there was only sky and a icy mound not half as high. This was to be investigated and I rushed outside. The sunlight sparkled off the once towering white trunks now bent down like Michele Kwan herself, finger tipping the icy floor.

Such was the essence of fairyland where I could enter and travel a sparkling arching circular hall and feel myself full of sunlight and glassy icy chimes. This surely must have been my own personal walking meditation.

Natalie named herself "Nakki" when she was so young she couldn't pronounce her name. Some of these childhood memories of nature must be credited to Nakki. The rest are by an almost elderly adult who found her earth connections so strong they informed much of her poetry and other writing.

Bird's-foot Violets

By Maxwell C. Wheat, Jr.

In May,
Before the coliseum and suburbs
The prairie was celestial
With lavender petals and Bird's-foot Violets.

Today, in a lot, I kneel
And smell fragrance my mother knew
The days I ran home with bouquets
She snuggled her face into
And taking me on her lap,
Tell the story of why the leaves
Are shaped like plovers' feet.

Gifts of Springtime Past

by Aline Euler

Spring Light

After 5 pm supper, spring light evoked memories of Dick and Jane Readers
when all was right with life.
Mom and Dad were young, Grandma and Grandpa were well;
Yards and "vacant" lots held nature
In esteem - to explore, enjoy, learn and cherish.
And time was eternal.

Spring Sounds

From delicate to powerful - a single house sparrow to a raging, scary thunderstorm.
The chorus of bird songs permeated the light of day and brought solace to thoughts.
Song; intricate, beautiful; never duplicated by us.
Thunder, the gods were bowling, wind, rain for the ponds and frogs, maybe a rainbow.
How were these sounds made? Silent Spring?

Spring Aromas

Wonderful nature perfumes, some faint some strong
Embraced me, immersed me in another world.
Like sweet berries inexplicable but enchanting.
Honeysuckle, locust trees, clover and lilacs;
Flowers; a springtime fantasy - no pollen reports.
A bouquet of peonies for teacher, white, pink, deep red from our garden
Marking the walk to school with petals and an unforgettable fragrance.

Spring Events in the City

On warm evenings bedtime in a screened porch counting passing cars to fall asleep.
Long waits between cars. No alarms or boom boxes.
Nighttime was quiet, still, peaceful and dark. Sleep was sweet.

Digging the soil for a garden, a rich smell of the giving earth pervaded.
String to make the rows straight, manure from the stables to feed the plants.
Tiny seeds locked with magic to grow into plants like the farmers.
Tomatoes, cukes, beans-green and yellow, peppers and squash
How delicious the fresh picked taste.

A robin's nest on the branches of the sycamore tree, eye level with my bedroom window.
Patient mother egg sitting, protective mother helpless babies,
caring mother feeding babies, nurturing mother teaching babies to fly to be set free
Like me.
We are a part of nature in this magnificent universe.

Gone today but not forgotten!

Early Childhood Nature Memories

by Nathan Finck

As I think back to my childhood days, two major factors stand out which helped to kindle my interest in the natural world.

Our elementary school had a home vegetable garden program. We were given a variety of seeds and some tomato plants. A teacher would visit once or twice during the summer to view our gardens, provide encouragement and, if necessary, provide needed advice.

In the fall, a "fair" was held at the school where we brought in some of our produce and received ribbons for our efforts: a rewarding experience.

Having the opportunity to work in the soil and then watch the plants emerge and develop was very exciting. Each morning I would rise early and rush out to see what changes might have occurred overnight. I believe this activity was a major reason for my decision to major in botany in college.

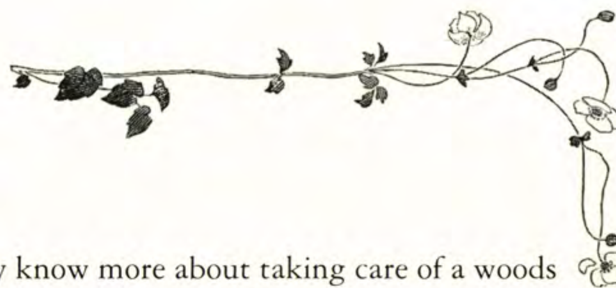
Some members of my family had an interest and love for the natural world. My Dad bought a home near a city park. As a result, I had easy access to a small creek (somewhat polluted), a mile walk to Lake Erie (for swimming and walking on the ice in winter) and even hills for sledding.

On our semiannual visits to relatives about 40 miles away, my Dad would insist that the whole family stop for lunch at a State Park (now a National Park) to view beautiful ledges and a northern hemlock forest.

My older brother has a deep respect for the natural world and spent a great deal of time in one of our local Metro-parks. Many times we would enjoy hiking the forest trails, not realizing that one day I would be employed by the same park district as a naturalist.

Although I may have had an affinity for the world of nature, it was encouraged to develop and flower by a school garden program and family members who shared this interest.

My Woods



by William Howenstine

I want to tell you about my woods. Well, it really wasn't my woods at all. In fact, I never did have a deed to it or anything to show that I owned it, but I liked it a lot and took care of it and pretended I owned it – and that is good enough. This was when I was just a little kid, and that's all for the better since little kids usually know more about taking care of a woods than grown-ups do. Generally I owned it all by myself, but I always let my friends go there. And sometimes I would even let my brother or sisters or maybe Rog or some of the other kids help me own it.

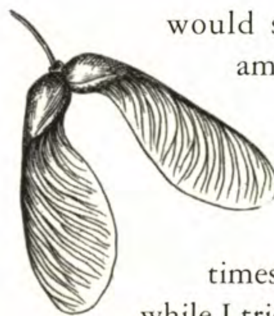
It wasn't very much of a woods, really,

although it seemed big to us then. It was right on the edge of town and formed a big "L" around a section of houses. The woods extended along several city blocks and was itself about a block wide. Beyond it the country started. Across one arm of the "L" a large pasture stretched out, and across the other arm of the "L" there were farms and smaller, scrubbier woods. We lived almost in the corner of the "L", and that made it easy to reach any part of the woods quickly.

There was nothing spectacular about my woods. Our town had a city park that had some beautiful hills and rivers. And not so very far away was Lake Erie. But my woods had no hills, no rivers, no lakes, and no great big trees. I suppose it was just another ordinary woodlot to most folks – a place to breed mosquitoes or dump trash or a place to get a little firewood. But to us kids that little woods was a wonderful place full of exciting things. No matter what time of the year we were there, we could always find something unusual to see or do. Best of all, it was close to home and just our very own. How could a kid keep from liking it?

It was my brother who first showed me the woods. I always supposed that he owned it before I did. He used to take my sisters and other neighborhood kids and me on wonderful hikes through the woods. He knew all about the things we saw out there, and since he was older, he was always the leader of us hikers. I especially remember the fun we had chasing. My brother would get us way out in the woods and then run ahead and hide somewhere. We would follow him as fast as we could, but it was all I could do to struggle along with the big hip boots I used to wear. Then he would ambush us, jumping out to startle us. We were sometimes afraid of getting lost; yet it was so exciting. Though we would plead with him not to run from us like that, we would have been disappointed if he had stopped.

When just the two of us walked through the woods, my brother taught me the trees. He



would show me the differences among them and name them and then would continually check and recheck to make sure I learned them. We would sometimes stand by a tree for minutes while I tried to think of the name. It wasn't long before I knew most of the trees in the woods. I knew that the pin oaks and the maples were the two most common trees. I knew where I could find a grove of young hickories. I knew where the one big beech tree of the woods was located. One by one the trees became familiar to me. It made it so much more fun going to the woods because now I knew more of the "folks" who lived there.

Trees weren't the only things he taught us. One of the most exciting times of all was the day in winter that we found some raccoon tracks in the snow, leading out to a tall elm tree in the pasture. It was a damp, shallow snow, and the tracks showed up plainly. I had never seen a wild raccoon; to me it was just a big wild animal I had read about. But right before me that day my brother showed me its tracks. (I wondered later if we weren't looking at squirrel tracks, but that didn't matter then.)

When my brother went to college, the other kids and I would hike through the woods by ourselves. We were older now and a little more daring. In the fall we sometimes went out and gathered nuts. In the winter we tried to track down the rabbits and squirrels to see them run out of their hiding places. We learned where all the bad patches of poison ivy were. We found where the blackberries grew the

thickest and where the strawberries grew the largest. We discovered an old sidewalk covered with grass and leaves on the other side of the woods. And we knew right where to find the one big glacial boulder. We hiked and ran through the trees till we knew our way around perfectly. After all, whose woods was it?

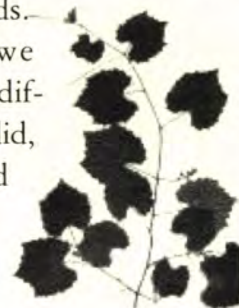
In some places the woods was quite low and swampy, so that in the winter large areas would be frozen over with ice. We could sometimes ice skate for long distances from one pond to another by means of little, narrow, icy networks. In the spring we had even more fun on the "rubber ice." When rubber ice days came, we put on our boots and ran to the woods the first thing after school was out. From pond to pond we would go, bouncing on the thin rubber ice to see how long we could last without the ice breaking in and our feet getting wet. It was almost a disgrace to come home dry. I suppose our mothers got pretty mad at us for getting a "bootful," but we really didn't mind, and I don't think we very often caught a cold from it. What we didn't like was when we would sometimes slip on a tilted piece of ice and fall all the way in the pond. That was a little too cold!

By late spring or early summer all of these little ponds and swampy areas dried up so that all we had for water were the big ponds. There was a pond at the end of Park Avenue where it ran into the woods, and an even larger pond at the end of Garford. These were the places where we went with our cans and jars in the spring to catch polliwogs and spring peepers. There were all kinds of little water insects too, some of which we didn't like so well. But the polliwogs we liked, and we never failed to catch them when we wanted them for school.

Among the best things of all were the little spring peepers. We could hear them singing all the way from the ponds to our house on a warm spring night, and it was quite a prize when we could catch one. We sneaked up ever so quietly to the edge of the pond and watched them peep with their heads stuck out of the water and their little throats swelling and blowing up like toy balloons. One in a while we would find a salamander, too, and that was an even better find. We really didn't know what they were though and called them "lizards." Sometimes, too, we would catch a green frog or a leopard frog.

There was one other pond that was important. It was smaller than the other two, but farther away which gave it more excitement. It was just a little round pond out in the middle of the pasture, and in a hot dry summer it would dry all the way up. We called it Duck Pond, though I don't know why, since we never saw any ducks there. One of the best times was when our folks let us boys go out there for a picnic. We packed our lunches in paper bags and started out early one morning. It was probably only a half mile there, but it seemed like miles – and probably took us as long as it would take to go miles. We stopped at all the flower patches and at all the holes in old stumps or hollow logs. So it was noon before we even got to the other side of the woods.

By some chance we came out of the woods at a different point than we usually did, and at that place we found some wonderful grapevines. This was the spot for our lunch! Up in the grape-



vines we climbed. Tarzan calls echoed back and forth through the woods, and little Tarzans jumped and swung around. It was a sunny day in spring, and the vines were just what we needed. It was the kind of day that a kid feels like hollering and running and just plain going somewhere, and we did all that with those Tarzan vines.

After lunch we set out to find the Duck Pond. We sort of knew where it was, but none of us had been there before. So when we first spied the reeds and rushes around the pond blowing in the wind, you can imagine our excitement. Just one call of "There it is!" and we were all off as fast as our little legs and our boots would let us go. When we got to the pond edge, there really wasn't much to see, although we were as happy about the whole things as we could be. There was just a little bit of water with lots of reeds growing around the edge. We saw hardly any animals, only a frog or two. But we waded out as far as our boots would safely go – maybe a little farther – and groped around in the cool water with our sticky hands. We felt like real explorers! It was so much fun that afterwards the name "Duck Pond" always stirred up some sort of eager feeling in me, and I was glad that it was in my woods.

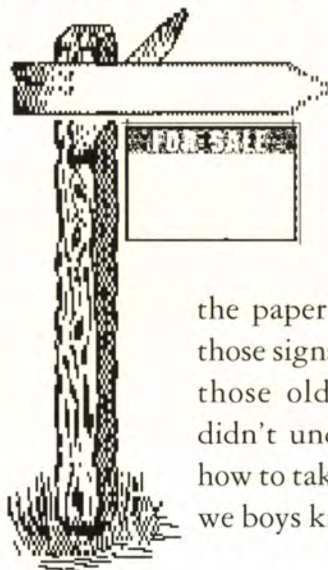
On our hikes through the woods, we sometimes came across a little shanty that the older boys had made. (We let them use my woods too, since we really couldn't do very much to stop them.) We envied those boys for the nice shelters they could build. We tried to copy them, but I guess our shanties looked more like a bush pile with a hollow on one side.

Outside of those older boys there wasn't anything in the woods that really scared us – except for the horses once. About seven of us kids went through the woods one summer morning when the clouds hung low and the air was misty. It was impossible to see anything over a hundred yards away, and that made the woods seem enchanted. We climbed under the fence and started across the pasture. While having a splendid time running and playing around, we suddenly heard a noise that startled us. Looking up, we saw coming toward us through the mist three or four horses galloping as fast as they could. (Maybe they were only trotting!) None of us knew much about horses; we had seen them on farms, and that was about all. And we knew nothing at all about a running horse headed our way. So all seven of us took off at the same time and ran toward the fence faster than we should have been able to. By some luck we got through the fence just before the horses got there. We weren't happy about the whole thing, and went home early that day to play around the house.

There was hardly anything we wouldn't do to take care of the forest. None of us will forget the day Tom cam running from the woods shouting "Fire! Fire!" We rushed into the woods as fast as we could, and sure enough, there was a fire burning around the big boys' shanty where they must have left a campfire going. We started stamping away at the flames with all our might, and soon the firemen came with brooms to help us. For about two hours we fought the fire, and we were in our glory. We stamped with our feet and beat with the brooms and carried water from the pond till our tongues hung out. (We felt especially good about the water, since the firemen consulted us as to where the nearest pond was.) We even stayed until dark and missed our supper. The next day the newspaper said only something about "the neighborhood boys helping the firemen," but we felt sure that we had saved the day.

Not long after that we boys decided something definite should be done to take care of the woods, so we organized ourselves as the "Forest Patrol." In those days we rode our bicycles all over, so naturally thought of riding them through the trails in the woods in order to cover more ground on our patrols. Each day after school we would split up into twos and cover the trails thoroughly, watching for anybody doing anything wrong. Once we caught some kids starting a fire, and we stopped them right away. Another time we stopped a boy from chopping a tree, and still another time we chased out a couple of boys who were tapping some maples in the spring. We didn't want any holes in our trees. However, we were always careful to note the size of the boys we caught doing something. If it was some of the older bunch, we sort of laughed the whole thing off and went on patrolling. Or other times we would just sneak up on the older boys and hide behind the trees and watch them. I guess it made us feel good to know that they were so asleep that we could get right up close without being noticed, and it made us feel like real woodsmen to be able to stalk like that.

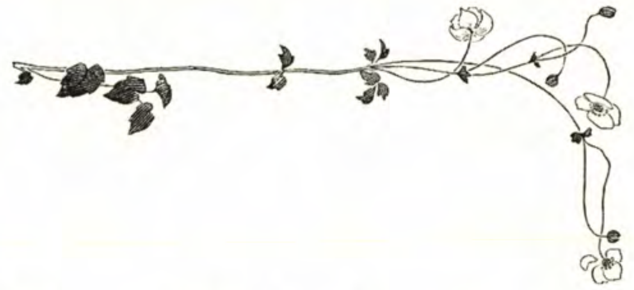
I was always afraid that someday someone would come and build houses in my woods. There was a vacant lot on one corner adjoining the woods that always had "For Sale" signs posted on it. Rog and I didn't like that so we tore up all the signs once. Then some man came and bawled us out and made us pick up all the paper and told us to leave those signs alone. It seemed like those old folks around there didn't understand much about how to take care of a woods. But we boys knew.



A street bed had been cut through one portion of the woods, but never was paved because of the arrival of the Great Depression. Fearful of a building revival, our Forest Patrol once dug up a bunch of oak seedlings from a vacant lot, transported them in our little wagon to the unfinished street, and planted them among the grass and goldenrod, so as they grew larger they would make it more difficult for anybody to complete the road building.

When my brother came home from college during vacation, he would go with my sisters and me on long hikes. We would go clear across the pasture and down and up the big drainage ditch on the other side, then through the Osage orange hedgerow and across the next pasture to the road and across the road till we reached the Black River. Sometimes we would go all the way up the river to Rose's Dam. Maybe it would be autumn and the air would smell spicy and the leaves would crackle under foot. Or maybe it would be winter and the air would be snappy and the snow would crunch under our boots. These were the longest hikes of all – and the best of all. It would be dusk before we crossed the pasture and climbed through the fence back into the woods on our way home. It was then we sometimes saw an owl sneaking away through the trees ahead of us. When we got home, we had popcorn and hot chocolate while we looked up in Seton's *Book of Woodcraft* some of the things we saw.

Not long after that I moved away and the woods is mine only in memory. The woods is a subdivision now, with a few of the old trees still surviving in backyards. I've often wondered how many kids ever get to "own" a woods like mine. I hope a lot of them do. I've seen lots of little woods like mine around, and they are so much better for kids than for other people or houses. Other people just don't seem to know how to take care of a woods like kids do.



Wings of a Summer Night Our Native Silk Moths

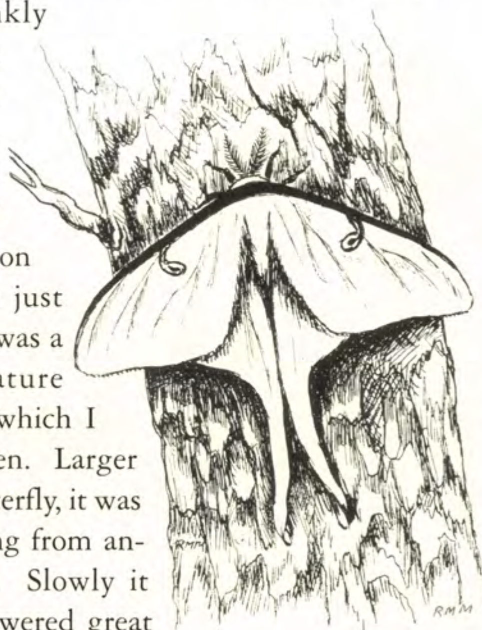
by Robert M. McClung

I still remember vividly two incidents that sparked my boyhood hobby and lifetime interest – moths and butterflies. The first occurred on my grandfather's farm in western Pennsylvania when I was seven or eight years old.

The June day was warm and sunny as I set out to explore the countryside. The air was heady with the clean fragrance from a nearby field of red clover. Bobolinks were pouring forth their rollicking tunes from one end of the field to the other, and a host of burly bumblebees were droning from blossom to blossom gathering nectar.

I stopped for a moment to watch a couple of swallowtail butterflies chasing one another, then wandered on down the dirt road, past another field, and into Dunn's Woods. An inviting tree-covered slope, Dunn's Woods boasted a clear spring that flowed out of the hillside beneath a shady canopy of white oak, hickory, and a few ancient dying chestnuts.

I paused at the spring to scoop up a drink of water, then started to climb the slope, savoring the crinkly sound of last year's leaves underfoot. Suddenly I stopped short. There on a tree trunk just ahead of me was a strange creature the likes of which I had never seen. Larger than any butterfly, it was like something from another world. Slowly it raised and lowered great wings, pale green edged with deepest purple. Long, shimmering tails swept back from a body clothed in white down.



Luna Moth

Holding my breath, I held out my finger, hoping that the moth would climb aboard. Disturbed, it waved its lavender feet restlessly and flapped its big wings once or twice. Then it clung obligingly to my finger. I saw that two golden feathers, like antlers, jutted out from its head. I didn't know it then, but this was a newly emerged luna moth, the first of our big native silk moths I had ever encountered. More than three-quarters of a century later, the perfection and beauty of that moth to my impressionable young eyes still haunts me.

Luna Moth

Shielding the moth with my straw hat, I hurried back to the farmhouse as fast as I could go, and showed the treasure to my aunt. It was she who told me it was a luna moth. I put the luna on the rambler rose that screened the front porch of the farmhouse, and it hung there all day long. Finally dusk came, and the moon showed over the apple trees. The moth's wings quivered, then began to flap rapidly up and down. After a moment luna took off and sailed away over the orchard. It was a moment I would never forget.

The only moths I had known before that day were small drab ones that gathered on the screens at night, or got into our stored winter woolens. I searched far and wide for other big moths that summer, but didn't find any. By fall the luna was just a cherished memory. But then a second opportunity presented itself for becoming acquainted with big silk moths. I was playing "kick-the-stick" with a couple of cronies in our front yard when I found a brown crinkly bag, about three inches long, fastened to a branch.

"What is it?" I wondered as I examined the bag. It was a dull brownish color, solid and crinkly, with frizzled threads at the tapered end. I shook it and felt some object inside the bag shift back and forth. I didn't know what it was and neither did my friends. Finally we took the bag inside and showed it to my mother. She told us it was a cocoon. Perhaps a big moth like my luna would hatch from it.

"Why don't you take it to school?' mother suggested. "Perhaps Miss Gregel can tell you more about it."

Miss Gregel was my third grade teacher – a dark-haired lady with glasses. She was happy to see the cocoon. Holding it up before the class, she told us that it was the cocoon of a big moth – a cecropia. She placed the cocoon in an empty chalk box and wound white string round and round the box, first one way and then the other, making a kind of net top so the moth could not get away when it hatched. She put the box on the windowsill, and told us that the moth would not come out of the cocoon until spring – a long time away. Soon we forgot all about it.

But one morning when I came to school the next spring, Miss Gregel told me to look in the box. The moth had emerged at last. My eyes popped with excitement when I saw it fanning its huge wings slowly back and forth.

The cecropia was nothing like the luna. It looked as big as a bird with a wingspan, when measured later, of six and a half inches. The big furry body was striped with orange and black and white, like a tiger, and its wings were dark gray-

Cecropia Moth

black, with bright orange and white crescents in the middle of them. No one in the class had ever seen anything like it.

Miss Gregel told us, however, that cecropia moths were not rare. They flew only at night and rested in hidden places during the day. That's why we hadn't seen them. She went on to tell us that there were a number of other kinds of big night moths just as spectacular as this one. She told us how they mated and laid eggs, how the tiny larvae that hatched from the eggs ate leaves and grew into big green caterpillars that finally spun cocoons. Inside its cocoon, each caterpillar shed its skin and became a brown pupa, something like a mummy. Then a miracle takes place within that pupal shell. A moth is formed. When warm spring weather arrives, the adult moth emerges – just as our cecropia did.

The next day, Miss Gregel chloroformed the moth for me and showed me how to mount it. Her mounting board was merely the stiff cover of a cardboard box in which she had cut a slit for the moth's body. I watched as she spread the wings and pinned strips of paper over them to keep them in place until they dried. When it was ready, I took the mounted moth home, and put it on cotton in a picture frame and hung it in my bedroom. Miss Gregel had opened up a whole new world to me, and now I was hooked. I became a hunter of moths, and of their caterpillars and cocoons. My interest soon included butterflies as well.

As a fledgling moth and butterfly hunter,

the first thing I needed was equipment. The frame for my first net was made from a willow hoop, the end of which I looped around in a circle and bound to the stem. My mother made a bag of mosquito netting and sewed it to the hoop. A family friend helped me make a durable mounting board from scrap lumber. I needed a killing jar too, and first made do with a bottle in which I put a wad of cotton soaked with gasoline or cleaning fluid – used under the watchful eye of an adult. Several years passed before it was decided that I was old enough to use a cyanide jar, provided I kept it on a high shelf and used it only under the supervision of an older person. My parents added to my pleasure by getting me some Rikker mounts and giving me a copy of Holland's *Moth Book* for my birthday. I was still a bit young to get very much out of the book's text, but I spent many hours poring over the many colored plates.

One of my first catches that summer was a huge tawny moth with big peacock eye-spots on its hind wings – a polyphemus. I found it at the farm. It was resting on a branch beside a woodland brook. I would never have spotted it if I hadn't inadvertently brushed against the branch on which it was resting, causing the moth to suddenly open its wings and display the big eyespots.

Polyphemus Moth

I combed the woods and fields throughout the summer, and added several other moths and a number of butterflies to my collection. As fall came on, I began to search for caterpillars too. It was a rare Saturday that I didn't come home from a hike through the countryside triumphantly carrying a half dozen or more big pursy caterpillars. It wasn't long before I could tell almost at a glance whether a particular tree was likely to hold any caterpillars. Partially eaten leaves were a likely clue, but caterpillar droppings beneath the trees were sure evidence. As I walked to and from school every day, I scanned the sidewalks and street beneath the shade trees for such signs.

Soon our back yard was lined with boxes of all sorts, each covered with mosquito netting or wire screening, each holding one or more caterpillars and branches of the leaves they ate. It was my self-imposed task to gather fresh fodder daily for the caterpillars and clean out their cages. Then I would watch as a big cecropia caterpillar – four or five inches long – chomped on a leaf, its head stretching up and down, its tiny jaws working back and forth like a pair of scissors.

When my stable of caterpillars began to spin cocoons, I was fascinated to see that same cecropia caterpillar waving its head rhythmically back and forth as it coated a branch with loop after loop of glistening silk. After constructing a framework of silk struts about itself, it would finally begin to spin the outer walls of the cocoon.

When winter arrived I searched for cocoons in the woods and fields around town. I, who had never noticed a cocoon before the first one that I took to Miss Gregel, now began to find them everywhere I went. In those days before DDT, they were quite plentiful. By spring I had a great many cocoons in a big box on the back porch – all kinds mixed together. Every week or so I would sprinkle them with water, for I didn't want them to become too dry.

Finally the long-awaited day would come, usually in late May, when the first moth emerged – perhaps a polyphemus that butted its head against the moistened end of the cocoon until the silk strands broke and the bedraggled adult struggled out through an incredibly small opening. It would crawl about restlessly until it found a suitable perch. Then the damp, elongated body would begin a pumping motion as the newly hatched moth pumped air and blood throughout

its body and into the veins of its tiny wings, no bigger than thumbnails. Slowly the wings would expand. In about a half hour they would be full size but still drooping and soft as cloth. After another couple of hours, the wings would harden and be ready for flight.

Polyphemus Moth

After that first emergence, the moth season was back in full swing, as cocoons began to hatch nearly every day. I kept perfect pairs of each species for my collection, and usually let the others go. Those moths and butterflies were a boyhood hobby that eventually led me into a lifelong interest in all animal life.

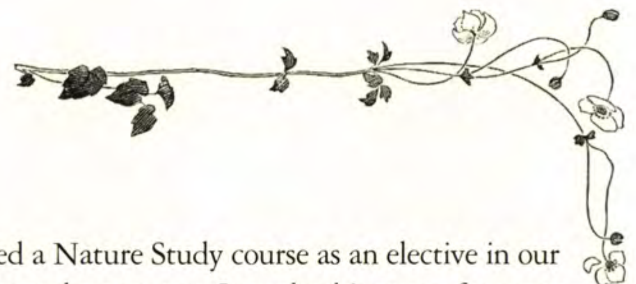
I don't "collect" moths and butterflies any more, but I still have the same old feeling about them, and love to watch them wild and free. I hope that young people today are developing a like interest in nature, feeling the same sense of wonder that I felt at their age. I know from my own experience that such an interest is often sparked by some particular incident, or by the enthusiasm and guidance of some teacher or other adult. A youngster's whole attitude about the world about him can be influenced in this way.

Young people everywhere – and old people too – need to learn how to appreciate nature and respect it. Such attitudes are vitally important, not only for the physical welfare of the planet Earth, but for the health of the human species as well.

Illustrations by Robert M. McClung

Childhood Memories

by David A. Hancock



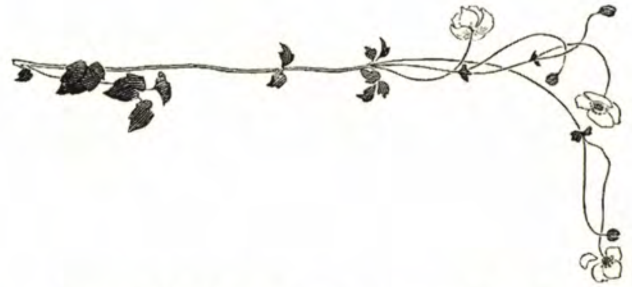
My childhood memories, interactions and inspirations from Nature revolve around my experiences in Cub and Boy Scouts. I'm proud to say that I am an Eagle Scout, and Order of the Arrow. My favorite merit badge was Nature Study. I was always – and still am – an outdoor type kid. Hiking, walking and sauntering in the woods reminds me of Thoreau's *Excursions, "Walking,"* Rachel Carson's *A Sense of Wonder*, E. O. Wilson's, *Naturalist*, and Roger Tory Peterson's natural history influence.

I did not realize that my early childhood activities and experiences would lead to a rewarding and meaningful 35 year teaching career in the biological sciences at a public high school. I developed a Nature Study course as an elective in our science department. I taught this course for many years, as its popularity increased to 100 plus students per year. Some of the "Nature Lovers," as I called them, majored in a biological or environment science and are now teaching or involved in environmental organizations, park naturalists, etc.

I have been teaching biology and environmental biology as an Adjunct Professor at a local community college for 20 years and am still teaching part-time. I am planning on volunteering at our County Metro-park system, which may lead to a new career as Nature Education Director.

I keep thinking of what Shakespeare said, "One touch of Nature makes the whole world kin."

God's Cathedral
By Natalie Sluzar



I think the falls for Daddy was like the greenhouse for Mama. Daddy called the falls God's cathedral. Mama called the greenhouse Heaven's room. They each had their own secret special place and though the places weren't truly secrets, they sounded as if they were the same place when they talked about them.

Daddy and I walked to the falls every spring and fall. In early spring, when the last bit of snow and ice was finally gone from the last shaded nook along the curvy high-banked quarry road, we faithfully hiked to the falls. There were five falls in a series and they were called Morgan Falls. No one outside our town knew they were there. They were deep in the woods on the far side of town. We couldn't see them or hear them from the road and the small bubbling creek told no secrets about the force and flight of water a mile and a half up creek.

We always wore our high boots and winter jackets. There was no need for protection at the beginning of the trip, but by the time we hiked and pushed out way through the tangled undergrowth deep in the woods we were more than glad we wore our winter clothes.

The cliffs were steep and the rocks were ice cold against our fingers. The air made us shiver. There were no leaves or green buds when we took our spring hikes and the sunlight was nothing more than a hint beyond the tops of the cliffs. There were many tall feathery hemlocks on either side of the deep gully and the largest of the pines leaned over the rushing water.

The creek deepened and widened at the final bend before the falls and we always stopped there and caught our breath.

"Ready?" Daddy shouted.

"Ready!"

We pushed and climbed around the last bend of the creek. We entered sound itself and there we saw more than a roaring cascade of ice cold water. Huge chucks of ice clung to the overhanging rocks and the rushing water moved around and behind the ice. Small rays of light bounced off the ice boulders and flashed into our eyes. The explosions were endless and no matter how hard I tried to think real words about something, anything, I couldn't.

"The last stronghold of winter," Daddy shouted and I read his lips, "where the seasons battle and man is in danger."

Let's Go for Bluebirds!
By Maxwell C. Wheat, Jr.

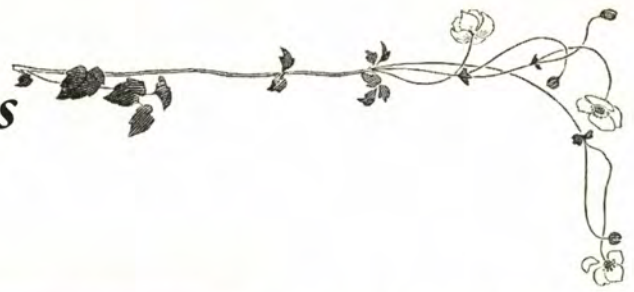
Grandfather would call on a February morning,
Snow sparkling in the sun.
Pulling on his wool cap
He'd lead me down the cow path,
Crusts of ice crackling under our boots.

"Wait. Let's look around," he'd whisper
when we reached the orchard.
We'd search rows of apple trees,
Their gray trunks gnarled, their branches craggy.

If I heard it,
The blue-backed thrush with chestnut breast,
I'd wait for Grandfather to point
Trying to keep his voice a hoarse whisper,
"There he is over there – a bit of sky!"

These years, when I hear bluebird song in late snow
I listen for Grandfather.

A Grandmother Remembers



by Ruth Melvin

My husband and I came to the realization sometime during the year of 1971 that we had twelve grandchildren we scarcely knew. They constituted the families of four of our children whom we saw infrequently. Something should be done! Our daughter Linda came up with the suggestion that we invite them all to visit us at our home in Ohio, all at the same time! It seemed like a heavy assignment. I was the geology instructor at the National Audubon Camp in Wisconsin for ten weeks in the summer. Was this too much to attempt at the end of the summer? My husband was an Eagle Scout, camping and scouting activities an important part of his life even during his college days. I had been a Girl Scout leader for my own daughters as they were growing up and culminated the experience by becoming a professional Girl Scout worker when they were grown.

The Melvin Family at Timberlost, June 2001

What an opportunity we had! We could hold a Grandchildren's Camp and pass on our experiences to our grandchildren. And so it happened. Our own progeny thought it was a noble idea, so we arranged to have them all come to our Chestnut Ridge home. We lived on a metropolitan park reservation at the time, where we had 600 acres of roaming space, a roomy farmhouse, woods, a stream, open space, one bathroom with a tub, no shower. It was not a completely ideal situation to host a big group of kids, but it definitely had possibilities.

So they came: from Denver, Milwaukee, Detroit and Chicago. There were John, Megan, Beth and Mia from Milwaukee; Diane, Mark, Albie and Mitch from Detroit; Leslie and Mike from Denver; and Chris and Marci from Chicago. We have a total of six children and the two youngest ones were married but had not yet started families. Figuring we might need some help, we prevailed upon the youngest daughter and her seminary husband to be counselors.

It was a warm summer Sunday when our campers arrived. Jack, my husband, spent the afternoon putting up his old Boy Scout big tent for the little boys (there were four of them), two smaller tents, one for the big girls, one for the little girls, and a pup tent for the one teenage boy. By nightfall, the sleeping bags were in place and we had enjoyed a picnic supper on our large screened-in porch. Grandchildren's Camp had begun!

Field trip to Rockhouse
First year of Camp, 1981

It worked. The kids were excited to see their cousins; they seemed comfortable with the sleeping arrangements, except for one six-year-old boy. He kept coming into the house, first for a drink, then to go to the bathroom, then a drink again. I finally said to him, "Mitch, I don't believe you really want to sleep out in your nice tent." To which he replied, "Grammy, it is so noisy!" This little city boy found the night sounds of insects more distracting than city traffic!

Timberlost and Nine Mile Lake at evening

Our first meals together were served on paper plates, paper cups and paper napkins. After assessing the volume of waste from each eating session, we decided we just couldn't go on with that system. So we announced that we would need help with the chores. Another six year old boy exclaimed "Grammy, you aren't going to make us wash dishes, are you?" To which I replied, "Mike, I'm not going to make you do anything, but you want to eat, don't you?" There was no further discussion. Charts were made, dishpans were produced, and when a meal was finished, the appointed workers took over.

The week flew by. It was a learning experience for all of us. Grandfather and I had decided to eliminate some scout traditions, such as inspection. But after two days of searching for missing shoes and looking at tumbled sleeping bags, we changed our minds. It was a great idea, for even though the children really didn't like it; they could see that the time spent after breakfast doing a clean up had advantages. Otherwise, the program, though simple, followed scouting procedures. We laid out a nature trail with each camper choosing a particular spot for his or her study and marking. One chose the small ash tree beside the kitchen door. This introduced us all to identification of opposite branching trees, trees that had diamonds in the bark and were used for baseball bats. One chose the Black Hand sandstone quarry just beyond the back yard where we learned about the qualities of rock for building and the history of the era when the huge blocks of rock were transported by a rock sled and horses to the canal locks just below our property. No hydraulic lifts in the 1850s to help with the process! One selected the big walnut tree that provided us with shelter for some of our activities. Our big boy, Mark, carefully claimed a stalk of poison ivy, even mounting a specimen carefully covered with clear plastic for easy identification. This was of particular value since one of our favorite evening games was called "spotlight," a game similar to hide-and-seek, where the hiding places sometimes had an abundance of poison ivy. The children made markers for their nature trail selection, studied the appropriate books, and were prepared to describe their part of the project.

Another favorite activity was evening campfire. We created a site and grandfather cut sections of logs for seats. Graham crackers, marshmallows and chocolate were campfire treats, as were good old songs and stories.

Fortunately, it was summer and there was good swimming down at Lake Logan, not far away. This provided baths as well as great exercise, and it was a real

Campfire on the Ridge
First year of camp, 1981

sight to see twelve kids stride into that lake. Crafts were elected for some mornings at which time we created bookmarks with wild plants as decoration, sealed under plastic. Some carved letter openers from small tree branches. Later the children became intrigued with Grandmother's hobby of leather craft. Purses and billfolds were first. Then actual leather carving prevailed with some very good results.

On Thursday, Jack and I planned a geology field trip to Old Man's Cave. We would take a picnic lunch and make it a day. I asked the campers if they had any suggestions for a menu. We had been serving whole grain breads at all meals, in an effort to emphasize healthful foods. When given the opportunity for selecting something different, our little six-year-old from Denver said, "Grammy, couldn't we have peanut butter and jelly sandwiches on sticky white bread?" And so we did. They loved the trip and had firsthand experience in understanding valley formation, erosion and weathering. Of course, the Devil's Bathtub (a perfect example of pothole erosion) and searching for the burial place of the "Old Man" under the shadow of the huge rock overhang were favorite activities.

One night it rained very hard. The little girls' tent leaked, so sleepy kids with limp sleeping bags trundled into the house and slept on the living room floor. It was no big deal – all in a camper's life! One day we had horseback riding, even for the youngest one, a little girl who had her fifth birthday on the last day of camp. (Her mother brought a cake and balloons and we had a great celebration.) On one occasion, the children decided to adopt toads. We had them in abundance and the kids decided they would make good pets. So we scurried around finding boxes for houses, water receptacles and grass for beds. This was acceptable until time to go swimming when I insisted the toads must be cared for at all times, which meant no swimming. The decision was quick. The pet toads were released to fend for themselves.

We had a second Grandchildren's Camp at the Ridge. This time we had a new camper, a two year old from Denver. The situation called for more help, which naturally meant the child's mother. It was a new dimension; an opportunity for all the children to meet the challenge of caring for a little one and it opened the door for expanding to include parents. At the end of that second camp, the children experienced the metamorphosis of a monarch butterfly. I had brought a chrysalis from the Audubon Camp, mounted on a T frame. We had been watching it all week at our dining table, hoping the change would come while camp was still in session. Sure enough, on Saturday morning while my daughter Pat held it for all to see, the butterfly broke through and slowly emerged. Pat looked at me and said, "Mother, this is wonderful! Why haven't I seen it before?" I was so glad we could all share this miracle, one of the many happy experiences I first had during the seven years of teaching at the Audubon Camp.

Jointly, a decision was made to change our location. We had five cabins available to us in the North Woods of Wisconsin. Our Timberlost was located in Vilas County, adjacent to the extensive Nicolet National Forest. The environment included many new program possibilities: the lake, the conifer-mixed hardwood forest, the unusual plants and animals, including deer, raccoons, porcupines, chipmunks in abundance, birds of many species, and plenty of space. There was even a need for parents. They were to come as house parents, preferable for children not their

Entrance to the Woods

own. Again it worked! Our own children were enthusiastic about coming back to the North Woods environment with their offspring. But it was still "Grandchildren's Camp"with emphasis on the children. They lined up at the serving window to be served first, and if there was a shortage, they were the lucky ones. One of the favorite campfire programs was in the large Marquette room in Saskatoon, the cabin having the largest assembly room. Here we showed slides of our children, now parents, and their first experiences at Timberlost at a time when they were comparable in age to that of their kids. The grandchildren found their parents' appearance and activities hilarious.

We Melvins inherited a camp activity that seemed a little foreign but became a great challenge and delight. The Browns had instituted a goofy golf course: nine buried tin cans more or less hidden in the trees and grass with sand "greens." The balls were rubber, the clubs just that-way limbs (the beaches at Lake Superior provided a source for good weathered sticks). The rules were the same as Pebble Beach, but it was very easy to hit a tree, a stump, a rock, or the wilderness! The game tended to reveal talent in the sport; some kids were better than others, but many were fascinated. They even learned to distinguish which conifer they happened to hit.

Golf in the woods? Incongruous but fun!

Tradition was a big part of the Timberlost heritage. The second year there (we celebrated our twenty-fifth year in 1996!) we created a new tradition. All of us sat down together and made a proclamation honoring Grandfather's friend, Mr. Walter Brown, who started it all, declaring our appreciation for the beautiful forest and all it embraced, and promising to care for this site and all of Mother Earth in the years to come. We all signed the document, sealed it in a bottle and took it up to the Nicolet Forest to bury it. A large flotilla of boats including our one canoe made its way laboriously up Nine Mile Lake. It was impressive; we called the proclamation our buried treasure, as indeed it was. Each successive year we made our way back to the site, retrieved the treasure, the oldest grandchild reading the manuscript. Back at camp, the new members signed the document (some with footprints when too young to write), renewed the promise and before camp adjourned made our way back to bury it for the next year. (There were new grandchildren added almost every year until the total reached seventeen!)

Another activity that became a tradition was a trek to Lake Superior. Our destination was either Little Girl Point or the Porcupine Mountains. The latter tells the geologic story of the formation of Lake Superior, the basalt rock and conglomerate formations making a basin, which the last glacier filled with water. Grandfather and I preferred this site, which provided a beautiful view of the lake and the opportunity to swim in the icy water.

Another favorite site, Little Girl Point, is memorable for the cold water swimming and riding on a floating log and the hours sorting through the diverse beach rocks hoping for find agates. These are the less then precious mineral occurring in the little pockets at the top of the basalt formations abundant in the Lake Superior area. Little Girl Point has become a poi-

Looking for agates, Lake Superior 1982

gnant memory because of the messy, delightful mudslide we experienced there. A big storm had occurred the night before one of our trips to the Point, enough to wash away and liquefy the glacial clay lake deposit. Even the lake echoed the storm – for about a mile out from shore, the water was a delicious pink. The twenty-foot embankment was as slick as a slippery slide and the kids had a wonderful time climbing up and sliding down. Bathing suits were disreputable but soon cleansed in the lake just below. Even the tiny two year old, a new camper from California, braved the slide, sans suit!

Lake Superior mudslide on glacial lake clay

One year we made a trip to Copper Harbor, aptly named for the mineral resource formerly mined there. The successful search for the important copper conglomerate outcrop that was one of the sources of the mineral, the rocky coastline, the scenic drive along the Upper Peninsula, and a visit to an old British fort made it a special trip. So much so that one of the younger parents and some of the older grandchildren elected to pitch a tent and stay overnight.

The Lake Superior area is famous for its many streams that tumble off the high dome of the Canadian Shield underlying the area. One of our favorite picnic and hiking spots has been Bond Falls where the small river cascades over the igneous rock to meet the more recent sedimentary formations and flow into the big lake. Compared to the Rockies or the Sierras it isn't spectacular, but for us it was a delight to walk along the tumbling, churning falls to the point of contact with the softer rock and back up the other side. All this, with red pine, white pine, balsam and spruce trees bordering the pathway, was enriching.

The years passed quickly and the grandchildren have grown up. Now our yearly reunions include a bevy of great grandchildren, who with their parents and grandparents continue to carry on the traditions and keep the faith. One year we changed our venue and camped at the YMCA Camp of the Rockies west of the impressive Longs Peak in Colorado. There we drove along the Trail Ridge Road high above the timberline, throwing snowballs from the tundra level in August! Another year we all trekked to Cape Cod, rented cottages and explored the eastern shore of our diverse country. We even climbed a glacial boulder as big as a house! Twice we went to Lakeside along Lake Erie in Ohio, a great experience for our young mothers who loved the huge sandbox where their little ones could play. Each place had its benefits, but the favorite place is still the remote area in Wisconsin where our heart are captured and our treasure stays buried.

Was our experiment a success? Was the assignment too difficult? In retrospect, by cooperative effort, the tasks of feeding, cleaning up and providing program came together very well. The years at Timberlost demanded a system where each family had the responsibility to purchase and prepare the food for a day. There was great ingenuity and considerable effort to make each day the best. One time, the teenaged girls from more than one family picked blueberries and made pies for all. Another time, a teen boy provided pizzas. Can you imagine having a real turkey dinner with all the trimmings as one special meal? A spirit of adventure, real enthusiasm, and even raucous laughter were evident in each project. How else could

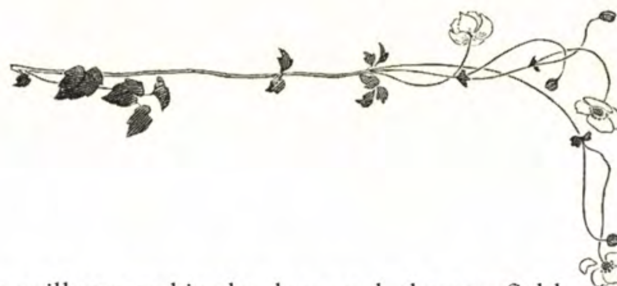
we have continued for twenty-nine years? Did everybody attend every year? No. Attendance has been the choice of the family members. Sometimes, such as our 25th celebration, practically everybody came, but varying responsibilities – babies too young for travel, vacation conflicts, or facility availability – affected the attendance.

The Melvin 25th Reunion from the North Woods, 1996

There has been no censure for not being on hand. Those available simply joined together to have a rich experience. Our conclusion? It may take years, but the family that works and plays together, loves the out-of-doors and learns to live with nature will find love, understanding and tolerance.

All photos courtesy of Ruth Melvin

Nature Study is Science Brought Home



By Anna B. Comstock

It is a knowledge of botany, zoology and geology as illustrated in the dooryard, the cornfield or the woods back of the house. Some people have an idea that to know these sciences one must go to college; they do not understand that nature has furnished the materials and laboratories on every farm in the land.

Thus, by beginning with children in nature study we take them to the laboratory of the wood or garden, the roadside or field, and their materials are the wild flowers or the weeds, or the insects that visit the goldenrod or the bird that sings in the maple tree, or the woodchuck whistling in the pasture. Children begin to study living things anywhere or everywhere and their progress is always along the various tracks laid down by the laws of life.

And Heaven and Nature Sing

By Maxwell C. Wheat, Jr.

Returning to our farm after midnight service
Grandmother points to the bright star in clear black.
"Listen," she whispers
as if we might hear the angelic chorus.
Then, over snow on the hay field,
From the woods in the back,
Intoning of Great Horned Owl.

Our Natural Pastime
by Don J. Miller

Growing up in a small town in northern Illinois during the mid sixties was a great experience. As a kid of ten I was on top of the world. I just didn't realize it until thirty years later. During that time I was not aware of the news happening around me. I'm not sure if I was protected from the grim world stories or whether they just bounced off me. Once school was out for the summer, I had one concern and that was how quickly every morning I could finish my orange juice and cereal and get outside to play.

Our house and yard had been selected as the town's recreational center every summer of my youth. It received that distinction for several reasons. I have two younger brothers, two and four years behind me who had the same interests as me: baseball, being outdoors and having fun. Our house was like a magnet that drew kids from ages seven to eleven towards it.

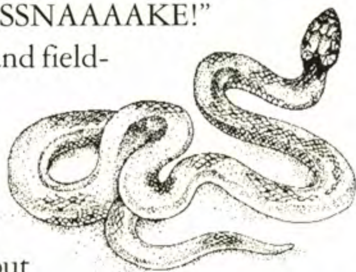
Kids from all over town flocked to our home partly because we had a mom who not only tolerated the masses, but also encouraged them. I think this way she always knew where we were. Mom also didn't mind fixing peanut butter and jelly sandwiches and serving Kool-Aid (the kind you had to add sugar to) for fifteen or more kids. The fact that my family owned a spare lot next to our house that was big enough to hold a baseball game with seven kids on a team, didn't hurt either. Directly in back of our house was a double lot that was overgrown with tall weeds and had a few old apple trees that refused to go the route of the rest of the old orchard. There also was a couple of "fox holes" that to this very day I have no clue as to who dug them or how they got there. The only rule of the yard was that everyone had to be gone by five o'clock. That was never a problem, starting at 8:00 am it gave us nine hours of continuous play (counting a fifteen-minute feeding frenzy).

Baseball was usually the game of the day when there was at least ten kids on the spare lot. The wild lot was saved for days when there weren't enough kids to play baseball or if a percentage of kids for whatever reason had to be home early. Of all the kids that visited, I remember only one Brave's fan, one Pirate's fan. All the rest of us bled Chicago Cubs blue. The field was complete with a home run wall with ads and a flagpole. It was a pole, not made out of metal, but a couple of 1" x 2" x 6' bean poles spliced together. A blue spruce marked the foul line down the first base line and a doug fir the third base line. A two-day suspension was given to anybody caught plucking the fresh, soft green growth from the tips of these two western tree species growing in our yard.

Most mornings during those days of summer, the game would not begin with the singing of the national anthem, but with the melodic song of the eastern meadowlark. She would often sit on our makeshift backstop with her black V contrasting her stark yellow breast shining in the early dawn sunlight. The meadowlark would belt her tune out louder and prouder than Kate Smith of that era would have sung *God Bless America*. At that time we had no way of knowing that in a few short years the Meadowlark would be chased miles from both of our homelands. Had we'd known that, would we have let her sing longer before each game? Her song ended and she would fly away when the catcher would take his position behind the plate that was

just a little too close for her comfort.

One would never know what to expect while standing in the on-deck circle waiting your turn to bat. It was located very close to the wild and weedy lot. Several times during the summer there would come from that direction a blood-curdling scream, "SSSSNAAAAKE!" Gloves would drop and fielders would race to see. Base runners would immediately leave their bases, risking being called out for leaving the base path to view the snake. The attention getter would always be a garter snake of moderate size. We would circle the snake like we did to someone who had just crossed home plate after hitting a homerun. There was never a snake killer in our group, but I also don't remember any snake holders either. Eventually we would realize that because of our circle of entrapment, the snake had no escape path. None of us wanted to risk the chance the snake would want to choose you as the weakest link to escape through, so we would collectively decide to get back to the game and leave the snake alone. The watchful eye of the on-deck batter would let everyone know if the snake intended to replace the person playing second base on the field and cause further delay, or if it would go quietly back into the tall weeds.



Our right field was different from most right fields. If the player out there got bored with the game, he had some options. He could, like most right fielders of our age, pick dandelions to stay awake or, unlike most right fielders in other ball fields, he could be mesmerized by the purple martins in our yard. The martin's flight is one of beauty, a flight swift, quick and powerful. It prompted our pitcher on one occasion to make the proclamation that he wished his outfield could catch flies like those birds do. The martins, like the meadowlarks, would disappear from the neighborhood before any of us would reach adolescence.

Chipping sparrows would annually be season tickets holders and take their place along the first base line in the blue spruce. With endless base runners sprinting by throughout the gestation period, like a home-plate umpire dodging a wild pitch, the female would barely blink at their passing. She had absolutely no concern for the ball and strike count, the score or the inning, but never was there a more loyal spectator.

Once while chasing a foul ball, our third baseman announced the discovery of a "weird bird with a hurt wing." We all got there faster than if we were stealing home plate for the winning run. He was right, it was a weird bird and it was hurt. We decided to catch it and take it somewhere to get it help. Every time we would get close to it, the bird would fly just far enough away to tease us to try to catch it again. After ten minutes of this game we decided to go get dad, he would know what to do. He came out and told us that the bird was called a killdeer, and that it pretended to be hurt to lead us away from its nest. We didn't want its nest; we just wanted the foul ball. We returned to our game and the killdeer stopped hers. A few weeks later, during the bottom half of the third inning, we were lucky enough to have a couple of little feathered balls with legs too long for their bodies, streak out into fair territory, much to the dismay of their mother, but to the great delight of us.

The years of summer went by as quickly as the days. As a boy not aware of worldly events, I was innocent to the changes that were happening in my neighborhood. It wasn't until the diggers ripped a basement hole into the wild lot that I realized I hadn't seen a meadowlark in years and the martins had vanished too. It was while this area was disappearing by the scoop full and being carried away by a truck, that I realized

it was the only place left for blocks that wasn't being mowed inches from the ground and had not a house on it. The snakes, birds and the sense of place that a small town group of kids had developed for this "wild place" were being destroyed into only memories. The lessons and the stories will live with us forever. I'm saddened for having loved and lost, but feel worse for the kids of today who don't get a chance to experience anything like my adventures. We didn't have to seek out life lessons; they came searching for us daily. We did not have the temptation of cable TV, video games and play that was structured and organized by adults. Back then it was an innocent age for a kid of ten, baseball was pure, friends were true, and outdoor play was all there was to do.

Copperheads in Carlisle? A Home-Town Natural History

by Ashton Nichols

Elm Yellows and Other Blights

I'll begin with dying trees. Not to put my readers off, but because trees are our clearest sign that nature is alive and well in our urban spaces, even if some of those trees are dying. Look out of your kitchen window and what do you see? Trees. Walk down the sidewalk in front of your house. Look to the right, look to the left. What's there? What's everywhere? Trees. Lots of trees. Maples and oaks, cherries and birches, ash trees and poplars, sycamores, lindens and plane trees. Oh, yes, and dying elm trees.

On the campus of Dickinson College in Carlisle, where I teach, there are still a dozen towering elms. Some of them stand almost a hundred feet tall. Some have been here since before the Civil War. Some of them have a circumference of ten feet. I have seen pictures of troops, after the battle of Gettysburg, stretched out, wounded or dying, under these trees. But now they all seem to have the blight. And almost all of these elm trees are dying.

The elm blight arrived in America in the present century. It probably came from Asia by way of Europe, transported by little bark beetles. The disease spread fast across America, not like a wildfire, more like a nasty virus. In fact, the blight is actually a fungus. It is called elm yellows by some, Dutch elm disease by others. On our campus, medicated fluids have been injected into the base of the trees to prolong their lives. These fungicide delivery systems connect long lines of plastic tube from root to root, since the disease can also spread from the roots of an affected tree to the roots of nearby neighbors. The blighted elms, however, almost always die.

One day when the tree surgeons were taking down one of the ancient giants in front of my office, I stood and watched as the branches crashed to the ground. Then the tree-fellers dropped the trunk in huge chucks that hit the ground with a solid "thunk . . . thunk." By the time they got their chainsaws to the stump, I was down beside the truck that was being loaded with massive logs. I asked for a thin slice of the fallen trunk, thinking that some one ought to keep a piece of wood that might have sheltered a wounded Civil War soldier.

The chestnut blight was an even more destructive scourge. It wiped out the second most common species in the North American Eastern hardwood forests even earlier in the twentieth century. After oaks, spreading chestnut trees were the most widespread tree throughout large sec-

tions of the eastern half of North America for hundreds, maybe thousands, of years. These days, on hillsides and mountains particularly, you can occasionally still find the rotted pile of the long-gone chestnut stump and out of its base come tentative shoot and branches, trying to take hold and establish a new adult tree. The blight has not killed these struggling trees completely. The root system is still alive, but whenever the tree reaches a couple of inches in diameter, the blight fungus strikes again, and the tree almost always dies before it can produce an actual chestnut to seed another tree.

Don't get me wrong. Blights are not all bad. They clear out spaces for new species to emerge. They are as "natural" as lots of other forms of parasitism, death, and destruction that characterize the nonhuman world. They remind us that nothing, not even a towering chestnut tree or elm tree, is free from the ravages of time and disease.

Squirrels as Wild Animals

Don't underestimate the squirrels in your back yard. Each one is as wild as a bobcat, as wily as a wolf. Watch them not as cute little furry creatures, but as the rowdy, ravenous rodents they really are. My wife says, "those are just rats with a bushy tail." One of my neighbors, otherwise as calm and kind as a person might be, hates squirrels with a passion: "I'd kill everyone I could, if I could get away with it," she says. She has lots of bird feeders, some of which were advertised as squirrel-proof. She throws buckets of water at the squirrels that get through the squirrel-proof feeder, and sometimes maybe even stones. Anyone who likes birds to the point of buying birdseed can never feel good about squirrels.

Squirrels are rodents. They are related to rats and beavers, marmots, muskrats, and wolverines. Destructiveness seems to run in the rodent gene pool. The problem with squirrels is that their appetite com-

bines with their emotional intensity. They eat seeds and nuts, they eat berries and green leaves of all kinds, and they search for their food as relentlessly as any animal you will ever encounter. Watch them chattering on the branch outside your window. Follow them as they scamper up the trees bark in the backyard, clacking in search of food or a mate or racing back to their nests as fast as their sharp-clawed feet will carry them. Squirrels look nice, I admit, but watch any squirrel carefully and you soon get the feeling that you are looking four-footed furry aggression right in the face.

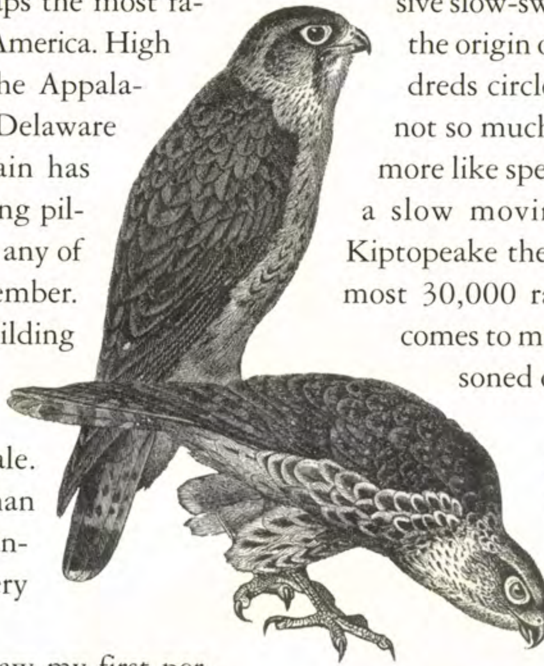
Squirrels are pirates. They're robbers. They dig holes in the flower beds and root up the potting soil in the pots on the decks. They leave piles of shells and seeds wherever they drop them, and they reproduce not only early, but often. They live in the trees overhead, but they always descend to make their raids through gardens, parks, and back yards. Squirrels remind us that animals can embody more than one principle at a time. Squirrels are cute enough, I agree, but they destroy plants and lawns and gardens. Squirrels are fun to feed in the park, but they can carry rabies, lice, and who knows what other nasties. I like squirrels, I just caution against liking them too much. They are cute the way coyotes are cute.

Hawks High Overhead

Look up in your back yard. Then look up again. Then keep looking up on any fall afternoon. If you live in vast areas of the country, you will see them. You will also see them in the spring, although not quite as often or as clearly. In my backyard, they are coming down the broken spine of the Kittatinny Ridge. Not far from my backyard, they are surging along the Atlantic

coastline by the thousands. These raptors on the move are not in the sky for our pleasure, but they will give us great pleasure if we let them.

On Hawk Mountain I saw mostly hawk watchers. The crowds of watchers there were so thick I could barely find a place to sit on the rocks. I had arrived on a November morning when the wind was steady from the north and the east and a high pressure system had moved through the night before. Hawk Mountain is, along with Cape May, perhaps the most famous hawk watching spot in America. High up on a rocky outcrop of the Appalachians, not too far from the Delaware Water Gap, Hawk Mountain has been a sight of hawk watching pilgrimage for more years than any of this year's watchers can remember. There is a hawk-watching building in the woods now, with hawk-watching displays and hawk-watching items for sale. There are still more hawks than hawk watchers on Hawk Mountain most days, but not every day.



On Waggoner's Gap I saw my first peregrine falcon. Waggoner's Gap is two hours down the ridge from Hawk Mountain, and unlike the more famous spot, Waggoner's Gap rarely sees more than a dozen pairs of binoculars at one time. My first peregrine came in low from the north and east and shot over our heads like a streak. The eye patch was unmistakable, as was the tight torpedo-shaped body and the white mottling of the wings. The sighting ended almost before it had begun, but none of the watchers on the hill that afternoon said anything but "peregrine." I have seen other peregrines since, but never one that took my breath away with the same startling force of concentrated falconness.

At Kiptopeake on Virginia Eastern Shore several years ago, I watched more than 8,000 raptors in less than three days. That particular hawk watch broke records of all sorts. The conditions were ideal. The wind was steady and brisk from the north and northwest. The sky was clear to broken clouds. Sometimes the clouds made it easier to identify the birds by silhouetting them against a gray-white background. There were ospreys and bald eagles, merlins and kestrels galore, harriers and Cooper's hawks, sharp-shins and redtails, and hundreds of songbirds apparently along as bait. The broad-wings came over in massive slow-swirling "kettles" that explained the origin of that term. Birds by the hundreds circled slowly in a gigantic spiral, not so much like geese in a perfect V-file, more like specks of migrating raptor life in a slow moving tornado. That week at Kiptopeake the total count reported was almost 30,000 raptors. The word speechless comes to mind, even among the most seasoned of hawk watchers.

All of these hawk watching spots are literally in people's backyards. All of them are close to the most populated megalopolis on the planet (Boston to Richmond). Most people are not even aware that these hawk counting stations exist. But every year, like clockwork, since time immemorial, tens of thousands of raptors have made their way down these ridges and rivers and coastlines, headed south to the Caribbean and the Yucatan until the weather warms again. Then they leave their wintering grounds to trickle north in spring. Look up in the spring or in the fall. The hawks and eagles won't care if you are watching or not, but they will be there for you to see.

Boring Bees and Others

My front porch is plagued with boring bumble bees. On any late spring or summer afternoon they are there, sometimes just a few, other times by the dozens. They swoop down low from the maple trees and the hedge shrubs,

and they hover in the air until they settle under the bottom of the railings, hanging upside down and beginning their relentless gnawing. They leave tiny piles of sawdust beneath each of their holes. They cannot be shooed away, and the marigolds in ceramic pots seem to attract them rather than repel them.

I have been told that these wood-boring species are harmless. They have no stinger, or at least no stinger that they use on humans. My experience bears this out. No matter how close they come to us, they only hover. They never land. When they do anchor themselves, it is always upside down to begin their gnawing work. I have almost never seen one sitting on a branch or a flower. I have never been stung or heard of anyone being stung by them. I should know. I have gotten close enough to see their eyes and the veins of their wings in my efforts to get rid of them. All of my efforts have ended in failure.

For a while I decided to battle these bees in earnest. I wadded aluminum foil into the holes they had so carefully carved. I filled their holes with putty or spackle. In desperation, I even sprayed insecticide (a definite no-no in our house) along the base of the railing to keep the borers at bay. But the bumblebees always came back. They chewed out the putty and left it in piles beneath their new holes. They pulled out and chewed the aluminum foil with no seeming ill effect. The insecticide was effective for two or three days at most. By then my family was so opposed to the idea of poison that it was useless to try another chemical treatment.

Why do I add this little story about these bees to my hometown natural history? Just to remind us that sometimes even tiny creatures can win the battle with humans. The bees have defeated me. All of my efforts at controlling them have been a complete failure. I have given up. Now

I simply let these bees bore holes in the bottom of my porch railing to their heart's content, if bees have hearts. Their holes are always out of sight. Perhaps the bees are thinking of me.

Bats, and Other Winged Things

There are bats in my belfry. Well, not in my belfry exactly, but up there in my attic. I know they are there because they leave their calling cards behind. At night sometimes you can catch sight of them swirling around by the chimney or the edges of the roof. Once, when the kids were playing ping-pong in the basement, they started screaming frantically: "Bat. There's a bat down here." "There's a big bat, come quick." The bat was whirring through the joists above our head, dodging every obstruction, successfully negotiating the thousand obstacles in our playroom. Then it disappeared as fast as it had appeared, up a narrow crack between the plaster and the framing, all the way to the attic we assumed, since we have never seen a bat anywhere but in the attic until that moment.

Bats have a bad reputation primarily because of vampire stories and vampire bats. Vampire bats do lap at the blood of their victims after biting tiny bites for the purpose, but they only live in the tropics. That may be why vampire blood-drinking came to be associated with the only truly winged mammals. Flying squirrels don't count. They just have a fold of skin between their front legs and rear legs, not a real wing). Bats are wonderfully social creatures and they perform that remarkable echolocation we all learned about in grade school. That explains how they can fly so quickly and seemingly erratically. Their whole world in filled with countless signals

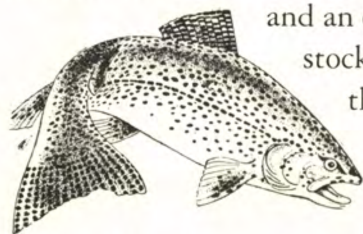
bouncing off of their ears and the objects around them, giving them a flawless three-dimensional map of their surrounding that lets them negotiate the narrowest caves and the busiest basements.

As for flying into people's hair, I have heard of it but never met anyone to whom it happened. Since I have met plenty of people, I figure that bats in the hair must be a myth made up by people who had to explain why they were killing so many bats. As for me, I'm going to get one of those bat boxes like my neighbor has that gives the bats a place to live near my house. Maybe that will help to move them out of our attic. Even if they decide to stay, however, I think I will leave them alone. The situation is a bit like the boring bees. Let the bats win. What's the harm. In fact, only good will come of such a truce.

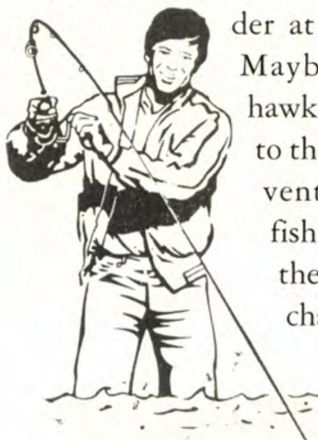
Bats eats their weight in bugs every day or so. It takes a lot of calories to keep flying so fast. That is a lot of mosquitoes, a lot of no-see-ums, a lot of gnats. I'm all for bats. Keep your eyes peeled at sunset. There's no town in America where you won't see them. They are not vampires. They're energetic living pesticides. We should keep lots of bats around.

Trout in the Yellow Breeches

Go down to the Huntsdale Fish Hatchery near Mt. Holly Springs and look at the wild fish display. It's a marvel of human engineering that reveals the marvels of not-so-human design. The human de- signers have built an inside tank and an outside fish-run and stocked it with the trout that are native or introduced to this part of Pennsylvania. There are rainbows and brook trout, brown trout and even palominos, those pinky-white hybrid trout that look like albinos, or rather, they look like what humans would look like if humans were trout.



In these unnatural conditions, these fish have grown to their "natural" size. That is, they have grown to the size they could reach if they were not being fished out of limestone streams by humans, or snagged out of the water by raptor talons from overhead. The natural size of most of these trout is huge. They all look like salmon. In fact, some of the old males get the crooked lower jar that often appears on large salmon. They swim lazily from the inside tank to the outside fish-run. They rise slowly up to the top of the water at feeding time. They look like fish in the Garden of Eden would look: no fishermen, no hooks, no hawks high overhead. Fishermen come to the Huntsdale Hatchery just to gaze in wonder at these trout monsters. Maybe sometimes a brave hawk does make its way down to these giant fish when they venture into the exposed fish-run, but if so at least these trout have a fighting chance.



These are the fish that made Pennsylvania trout fishing famous. These are the fish that made words like "Letort" and "Yellow Breeches" known the world over. These are trout we should all admire.

Waterfowl in Boiling Springs

The boiling springs at Boiling Springs, PA are not really boiling, but they are bubbling up out of the ground under pressure, and they do maintain a motion and a temperature that keeps them from freezing all winter. As a result, the lake at Boiling Springs attracts birds by the hundreds, sometimes by the thousands, when all other local ponds and lakes are frozen over. On most days in January or February you can find literally hundreds of waterfowl in the center of this small Pennsylvania town. Mallards and rarer ducks, wood ducks and geese of all sizes and descriptions, occasional mergansers, all waddling, sitting or swimming only yards from the front

doors of the residents of Boiling Springs. You can bird watch from the door of the post office, or the window of the Boiling Springs Tavern, or the convenience store on the corner. Families come from miles around to feed these winter visitors. Sometimes, the shed bird feathers and down fluffs get thick at the lapping edges of the water.

I like to think about a flock of Canada geese overhead, dropping down from the far north and passing lake after frozen lake, settling down on some icy pond for a rest, then moving on and suddenly spotting Children's Lake at Boiling Springs, thinking that they must be in Central America already because, hey, it's winter but this water is still rippling and unfrozen. Let's land.

Spiders and Their Kin

Don't tell me you don't like spiders. That excuse doesn't count. When my daughters were young, I swore that they would not grow up to be squeamish. So every time I saw a big spider, I'd call them over and explain about the eight furry legs, about the numerous eyes, about the venom that almost always posed no danger to humans. I showed them daddy long-legs and tiny jumping spiders, and once we watched a giant garden spider—really called a black-and-yellow *Argiope*—for almost half an hour because the kids couldn't believe how beautiful it was. We saw one black widow, and even then I explained what was good about black widows.

I encouraged them to pick spiders up when they weren't the dangerous kind. Usually, my young daughters agreed to pick up a spider only when I could convince them that the spider was dead. Sometimes I would pick up a living spider by a single leg, or let the spider walk across the palm of my hand and then, I must admit, I understood at least a part of the reason people fear spiders. Spiders are literally "creepy." They are one of the only creatures that really do "creep." When they do creep, lots of human skin starts to crawl.

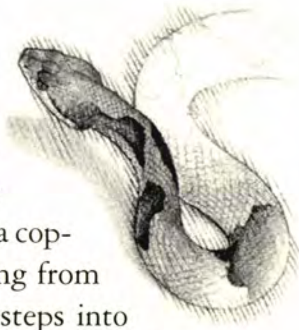
Nevertheless, I still like spiders. They make astonishing webs that look like jeweled patterns or silky tunnels. They can burrow in the ground or "fly" on strands of their own silk. They eat lots of nasty insects that would make human lives even more unpleasant if spiders weren't around. So what if there is an occasional black widow, or an even more occasional brown recluse, in the woodpile. That doesn't bother me, and it doesn't bother my daughters either.

Snakes

There are snakes in backyards too, in our cities and towns, in our villages. Not big snakes or poisonous snakes necessarily: garter snakes and green snakes, ring-necked and DeKay's snakes, and maybe even a blacksnake or two. Poisonous snakes are not always as far away as we might think, however. I know of two poisonous snakes that were right near my own backyard.

When I lived in Alabama, I was riding my bike one afternoon, and I came upon a five-foot rattlesnake, a Southern diamondback, lying by the side of the road, not ten yards from our neighbor's door. The snake was dead, and he was huge. So I returned with my car, and I put him in a pillowcase and carried him home for the kids to see. They were scared, and then they were fascinated. He might have been dead, but he had not been dead long. We looked at his fangs. We tried to milk his venom. We skinned him and stretched his skin on a board. Someone had already cut off his rattle. My daughter said that maybe the person who had taken his rattle

had also killed him.



Years earlier, I had known a graduate student in Virginia who lived not far from us. He was bitten on the leg by a copperhead as he was coming from his backyard down the steps into his basement. His leg swelled up, "like a sausage" he said, but when he got to the hospital the doctors decided not to administer anti-venom because of problems with allergic reactions that the toxic medicine often caused. So he lay there in his hospital bed for days while his leg swelled up, until you couldn't tell that he had a knee or an ankle. Finally the black, blue, yellow, and purple swelling receded. When I asked him later what the pain felt like, he said, "it felt like I had been stung by a thousand hornets."

I don't want to end my hometown natural history on this negative note, but I do want to remind you that even venomous animals may be in some people's backyards. There is definitely a natural history in your backyard, in everyone's backyard, on porches, and maybe even in the closet.

Don't get me wrong. There probably aren't any copperheads in the borough limits of Carlisle, Pennsylvania. But there might be. I'm keeping my eyes open.

Conclusion

Keep your eyes open, too. Turn over rocks. Look under logs. Tell your friends and neighbors about the wild animals that live in your town or your city. Don't leave this to the kids. Kids are always good natural historians. We should take a lesson from them. Get everyone watching. Help others to see what is near you. Keep a journal. Make lists of the animals you observe. Remember, wherever you are, in the city or country, in the suburbs or farmland, there are animals wherever you live. This is not just your backyard. This is their backyard too.

Lycopodium

By Maxwell C. Wheat, Jr.

"They are the elves' Christmas trees,"
Grandfather would say of Ground Pine and Cedar
Once, in the sun, I lay on snow eye-level
Trying to see colored lights and bulbs
Size of frozen dewdrops.

"They are lycopodium," Grandfather would say,
teaching me again to pronounce the name
because scientific names have sounds of poetry.

"Lie-ko-po-dee-um."

"You've got it," he'd laugh,
his hearty red face broadening behind his white beard,
his abundant frame rollicking.

When I return home for the holidays
I always walk back to our woods,
Think of Grandfather assuring a small boy,
"Yes, I'll see that the elves have a happy Christmas."

I am glad lie-ko-po-dee-um is evergreen.

Tell Me A Story

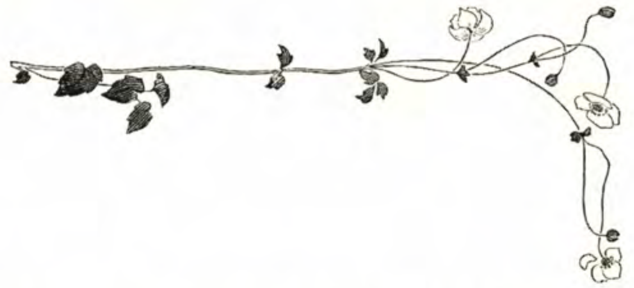
By Robert Penn Warren

Long ago, in Kentucky, I, a boy, stood
By a dirt road, in first dark, and heard
The great geese hoot northward.
I could not see them, there being no moon
And the stars sparse. I heard them.
I did not know what was happening in my heart.
It was the season before the elderberry blooms,
Therefore they were going north.
The sound was passing northward.

Tell me a story.
In this century, and moment of mania,
Tell me a story.
Make it a story of great distances, and starlight.
The name of the story will be Time,
But you must not pronounce its name.
Tell me a story of deep delight.

Cold Peas and Potatoes

By Natalie Sluzar



"Once," she said, "when I was quite young, God talked with me."

We were all in the kitchen, some of us sat at the table, some of us stood in the doorways. All of us waited for the batch of cookies to come out of the oven.

"I was shorter than the railing on the front porch," Mama said, "Grandma's front porch. What a wonderful place that front porch was, a room of green light and scented breezes." She told us about a vine with the great huge grape-like bunches of flowers, lavender flowers that hung from the branches and made a whole wall on the sunset side of the porch. "And oh, how they smelled, those flowers."

She bent over and took a sheet of cookies out of the oven and we smelled the strong dark promise of chocolate. Every cookie that was lifted off the tin and placed on the rack caused us to inhale more deeply. "You'd never guess in a year of Sundays what those flowers smelled like." She raised her brows and grinned her way around the table. She looked at each of us in turn and waited for a guess.

"Chocolate," piped Nicky and we all laughed.

"No", said Mama, "they smelled just like cold peas and potatoes. I stuck my nose into bunch after bunch of those lavender blossoms to be sure and each and every one smelled like cold peas and potatoes. It was as if an invisible dish of cold peas and potatoes sat right there behind the flowers on an invisible table. I used to stand on Grandma's glider and stretch as high as I could to smell the out of reach blossoms and they smelled the same as all the others."

She handed each of us a chocolate drop cookie.

"But the day God talked with me, that day I was just sitting on the glider smelling the smell and not wanting to eat cold peas and potatoes. The leaves made small papery sounds and across the room on the front side of the porch two sparrows chirped and hopped from branch to branch on a bush no higher than the railing. The air was a light yellow green and the glider moved back and forth, "creek, creek," back and forth, "creek, creek."

Then the leaves stopped their flutter and the birds stopped their hop and chirp. The smell of cold peas and potatoes grew stronger. I put my foot to the floor and stopped the glider. I remember how I was drawn to the sunrise side of the room. My footsteps didn't make a sound. I stopped at the front railing and looked at the still sparrows. Eye to eye we stared. And then I heard the voice.

"Little girl? . . .Little girl"? Louder the second time. I looked around the porch, at the ceiling. "Little girl"? I peered through the leaves at the sunrise side of the porch.

Are you talking to me, I asked.

"Yes, I am."

Who are you? There was no answer. I began to feel afraid and excited at the same time.

Are you God? I asked.

"I am God," the voice said.

Why are you talking to me, I'm just a little girl, I said.

"I want to talk with you," God answered.

"We talked some more. The birds didn't move, the leaves were still, the yellow green light was all around and slowly, slowly, I began to know what God would say, how He would answer before He answered, what He would ask before He asked."

Mama took a deep breath and looked at each of us.

"I was very young." She smiled at Nicky. "I was just your size, Nicky." She smiled to herself and sighed. "God never talked with me again."

What Makes a Naturalist?

by Verne N. Rockcastle

I was born in 1920 in Rochester, NY, of middle-class parents who had finished normal school, but only one continued to teach. The other was a full-time parent. World War I was over, the economy was steady, and middle-class life in Rochester was comfortable. My earliest introduction to anything of science was **tools**. My father, an industrial arts teacher, kept all kinds of tools in the garage, and I was free to use any and all of them provided I kept cutting tools sharp, and put all of them them away when I was finished with them. From pre-school years I became familiar with hammer, saw, wrenches, snips, and chisels. And sharpening stone! So many things were made from orange crates! The wood in them became a scooter on roller-skate wheels; a neighborhood shack; a book-case; and a cage for baby squirrels. At Grandma's I would visit a farm pond and rake out baby snapping turtles. I fed them scraps of meat, watching them shred the scraps with their tiny, oh-so-sharp and strong claws. I even froze one in a pan of water, then melted it out and released it. I learned that snapping turtles didn't die when they were frozen; they just didn't move in ice!

A young Verne Rockcastle

In East Bloomfield I found a pair of buggy wheels in an old barn, and I used them to make a T-shaped coaster with which to coast the mile downhill into Holcomb. I could sit on the wagon axle, holding ropes to the tiller that steered a baby-carriage wheel rudder Such fun miles downhill into Holcomb! And such sweaty miles pushing my coaster back up into East Bloomfield!

Earliest experiences with birds included trapping house sparrows lured under a propped-up cigar box. The sparrows were suckers for crumbs, and they couldn't escape the weighted box that plunked down over them when I pulled out the prop from my bedroom window upstairs. I never did anything with the sparrows, just held and then released them.

But the in-depth Nature Study came alive when our family summered at Tupper Lake in the Adirondacks. There my father allowed me free

and all-day access to the Racquette River. Ah, that river had perch and bass and northern pike (big ones more than 20 inches long!) among the lily pads (spatterdock) along the river's edges. Logs driven into the river bottom held chained log booms that channeled logs downriver. Those massive posts in the riverbank lured big bass, and I learned to entice them with frogs and crayfish. I became the river's most skilled bass fisherman with no annoying curtailments on where I could

go or when. If I was willing to row the heavy St. Lawrence skiff, I guess the river was as safe as any road.

I learned about plants and birds from Chester A. Reed's little book on American Birds, and flowers from a companion guide. They became my constant companions when I was hiking, or rowing, or biking. I learned about ovenbirds, bitterns, and flickers, and about wild sarsaparilla, Indian pipes, and trilliums. When digging worms for fishing, I learned first-hand about nettles. And I was duly impressed by the way yellow birch bark could make a first-class fire starter. So many things, such interesting things, and all of them free for the looking!

Rockcastle's Grandson

The Animals

By Maxwell C. Wheat, Jr.

I remember my young mother
In the back field of our farm
Showing me constellations
With the strong beam of her light.

Christmas Eve
She'd bundle me into my green-downed snowsuit,
Push my mittens under the sleeves,
Pull a red wool cap over my ears,
Take me by the hand down the path,
The snow glistening in her flashlight.

"I'll show you our bull," she'd say
and point to horns, red-orange eye of Taurus.

"See the dog dancing on his hind feet."
She'd trace the constellation, Canis Major.

"And a swan flying 'cross the sky."
I could really see the wings of Cygnus.

"Follow closely and I'll show you a whale."
I'd imagine Cetus breaching in a black sea.

This was my mother's way of showing me
On the night when a child was born in a manger

"God loves the animals."

A Personal Theory for Bonding Children to Nature

As the Nature of Nature Changes in our Communities

by William F. Hammond

Many of us who have lived over fifty years have observed much of our American landscape transform from rural pastoral wooded lands with clear flowing streams, prairies, marshes, ponds, and abundant and diverse wildlife. The land is now "developed" into a manicured, urbanized, paved, walled and fenced, ditched and channelized landscape, transversed by seemingly endless highway networks. As a child growing up in Great Kills, Staten Island, New York City, I experienced a childhood home range of a small bungalow backyard, to neighborhood, to wood lot, creek, beaches, salt marshes, bogs, and forest. By the time I was a seventh grader my home range extended more than seven miles in the suburban-rural Borough of New York City explored on foot, horseback and bike.

In today's society with a human population that has climbed from two billion to roughly six and a quarter billion (in my lifetime), my childhood experience has become extinct for my grandchildren. Very little of the exploration grounds of my wandering youth remains uncovered with urban infrastructure (stimulated by the Verrazano Narrows Bridge) with the landscapes altered to urban homogeneity. This condition has been created by a society that seems to need more capital to live its dream and thus must work to fulfill the quest while surrounding their children to surrogate parents in places called day care, early childhood learning centers, or Family Learning Centers. Even on weekends and after work, today's parents are often afraid (as are many school principals) to let their children explore their neighborhoods freely or to enter a rare undeveloped lot for fear of perverts, childnappers, or dangerous wild things beyond his or her realm of understanding.

As a living witness to this societal transformation, it has been of interest as my career (43 years) in education, natural sciences, environment, and creative learning, has grown. Helping to raise our children and now grandchildren made me eager to find out more about the implications of these changes on the human spirit and condition of a person's outlook on Nature as she or he grew up in this changing global community. At least two generations have been disconnected from direct deep interaction with Nature.

How is the next generation of children, especially the majority living in urban communities, gaining a connection to Nature? If the majority of children in the United States are being raised in cities and day care facilities, what does the future hold for their connections to Nature? A two hour Project Wild planning session panel discussion stimulated deep within my consciousness a life jarring AHa! About seventeen years ago that crystalizing experience sensitized me to a real societal dilemma as a parent, grandparent, educator, and member of the American Nature Study Society.

The epiphany struck after years of wondering about this condition when that Steering

Committee of Project Wild convened a panel of the "elders," all of whom had extensive experience teaching children about nature, especially in urban settings with "hard core" urban children. Among the panel members were Helen

Ross Russell, Stan and Dodie Mulaik, long leaders and supporters of the American Nature Study Society and mentors to so many of us Nature Study - Conservation - Environmental Educators. It was Helen Ross Russell who awakened a huge curiosity and sense of alarm in me. As chair of the session, I asked Helen, "How do urban children view wildlife?" Her immediate response was, "They usually kill it! Either from fear or lack of respect they stomp it out! Or, from curiosity and love they are fascinated with it and gently place it in a container, punch holes in the container and place some grass or rags for it to hide in.... they feed it hot dogs (no matter what "it" is)... and it usually dies from this loving relationship." When asked at the end of a fascinating discussion, "Helen, what are you interested in and what do you plan to work on for the next phase of your career?" Again, without hesitation, Helen said, "I am working with day care workers as they tend to know little about nature and often fear it. If we don't change this, children will gain these same views and experiences." The question that has plagued me since that day is, if Helen is right and I believe she is on target, how do we best teach children from birth to school age to bond to Nature and love it. How do we best teach and serve day care workers, facilities and programs no matter where they are?

My approach has been to draw insight from years of connecting with Nature, and teaching experience at all levels (including being a founding director of an urban nature center), helping to raise our four children, six grandchildren and lots of experience in the non-formal sector with children of all ages, and reviewing the literature and practitioner work. It is evident many dedicated early childhood education specialists have blazed a clear path on how to enrich a child's early learning by infusing nature activities and experiences into existing educational programs.

Many of the past leaders of the American Nature Study Society have been pioneers in teaching the young about and in Nature. Contemporary educators like Ruth Wilson, Marcie Oltman, and staff at the Minnesota Children's Museum, Patti Bailie and Helen Barti at the ECO Institute at Fontenelle Nature Association, and leaders in national initiatives like Project Wild, Project Learning Tree extend this dedication into the future. All are strong advocates for contextualizing traditional academic development through integrated nature-based activities and natural systems from early childhood programs through enriched campus environments.

In my search, it was enlightening to see the evolution of teaching children to read in the 1800's was enhanced greatly by placing Nature grounded literature exemplars in *McGuffries Readers* and other reading primers of the day. Nature experience of students was used to relate ab-

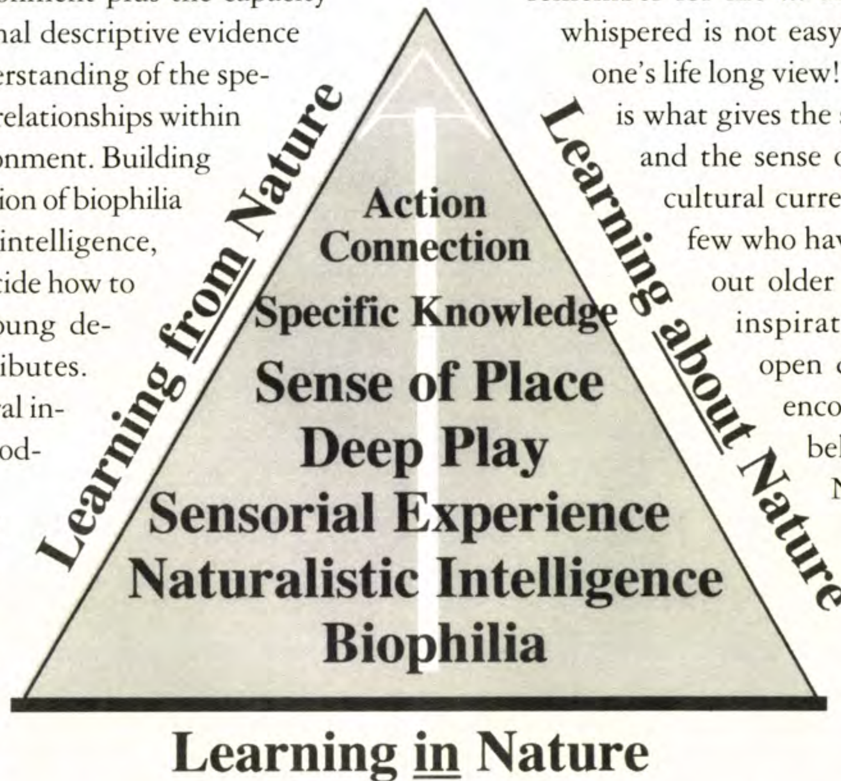
stract symbolic words to the rich agriculturally grounded experience of most children of the day. Experiencing Nature had strong support in the work of John Dewey and so many of his Progressive Education teaching advocates. Anchoring learning to a strong connection to Nature has been a central theme through the American Nature Study Movement, to the eras of Conservation Education, Environmental and Out-

door Education, and now Education for a Sustainable Future. All of the work underlying Nature-based learning and common wisdom coaches us on how we might best accomplish this work through good pedagogical practice and love for Nature. But I found no unified articulated theory to work by and assess our progress. Each of these people works from a deep insight that is indeed a theory but unavailable to the rest of us. I searched for a unified core construct or articulated theory of how to best bond children to Nature informally and in schooling and especially in day care programs and facilities. Ruth Wilson's *Framework for Quality in Environmental Education* with guiding principles and curriculum guidelines for early childhood practice are very valuable. There are many recognized and valued early childhood educational developmental theories on the best way to teach young learners in early childhood years (birth to five+ years). Each of these is a developmental learning theory and pedagogical construct for teaching young children. My concern is no matter which educational instructional theory you subscribe to, can you also assume it will bond children to nature simply by adding timely and meaningful nature related experiences and be effective in bonding children to Nature in the bigger picture of life? How do you distinguish and assess the difference of impact of Nature enrichment and grounding experience from the pedagogical theory constructs?

Thus, in my view, there is a need for a clear and cohesive theory on how to best bond children to Nature; a theory (even a "straw dog" theory) that could be overlaid on any of the various educational theories in early childhood education and provide a construct or framework as to how we might best provide a child with lasting connections to Nature. We must establish a set of criteria against which we can measure if learners taught within the framework of this theory actually demonstrate a love, affinity, sense of joy and wonder, connection, knowledge and respect in and about Nature to a significantly greater degree than learners who have not been provided experiences within this theoretical framework

In creating such a theoretical construct the following dimensions (in very brief summary form) are the stepping stones in the thought process: The biophilia hypothesis of E. O. Wilson affords a rationale that as humans coevolved with all other living species we have a deep affinity within us for those species. The question that arises is why the affinity for other species seems deeply expressed in some people and apparently latent in others? The key is the assumption that it is within every one of us to be connected to what Aldo Leopold called the "land" (which includes all life). If this biophilia attribute

is within each of us, how do we recognize it and nurture its expression? Howard Gardner offers a theory of multiple intelligences that now describes at least nine intelligences that meet his criteria for recognition and measurement expression as a form of intelligence. His theory of Naturalistic intelligence is a useful descriptor for recognition of the biophilia expression E. O. Wilson describes. Gardner's Naturalistic intelligence is centered on the ability of a person to observe, recognize, and describe the complex patterns within the environment plus the capacity to provide personal descriptive evidence of his or her understanding of the specifics of complex relationships within the natural environment. Building upon the foundation of biophilia and naturalistic intelligence, we must then decide how to help the very young develop these attributes. What is the central instructional methodology?



Based upon my experience, I am a great subscriber to Rachel Carson's instructional approach. Rachel Carson shares insights gained in raising her nephew Roger in her essay *Sense of Wonder*. She subscribes to providing children with deep sensorial experiences; walking barefoot in the wet grass, walking in the rain, sitting on the rocks on the edge of a stormy oceanside. Even wandering the yard or park area and becoming excited over an ant, butterfly, smelling a flower, holding a frog, looking into the eye of a bird, or some phenomena of the moment. It is not about teaching the "proper" names of things to children but in supporting them in creating descriptive names with you, the mentor, and ultimately finding the names others have given these wonders in field guides and appropriate sources when s/he is ready for that discovery. The part of this approach that many miss is that she felt it is critical that these experiences be shared by a child with an adult who conveys the sense of wonder and joy in experiencing this same time, place, object or event.

As author Daniel Quinn in his book *Ishmael* reminds us, "It is what your mother culture whispers in your ear that will be what you remember for life"... and what has been whispered is not easy to change within one's life long view! The adult sharing is what gives the sensory experience and the sense of wonder and joy cultural currency. I have found few who have succeeded without older more experienced inspirational mentors to open doors and provide encouragement, model behavior, be it with Nature or other important learning. Thus, rich sensory experiences in the out-of-doors spent in adventures and marveling at the wonders of nature and its players are at the heart of building one's naturalistic intelligence, developing a keen sense of one's biophilic connections and becoming bonded to Nature. Michael Cohen provides a very important insight and a set of exercises that help develop these personal sensory experiences in his work *Connecting with Nature*.

A secondary set of elements that I include in my cobbled theory of bonding children to Nature are: the dimensions of play, especially deep play; deep play where children (or adults) lose all sense of time and play becomes the reality,

(Ackerman). Children play peek-a-boo, go through a nest and "fort" building phase (whether in an apartment with blankets and chairs or rural woods); hide and seek, tag games, are all critical in a young child's development pattern. Play affords mental and gross motor skills to be experienced, imprinted, and refined as a part of building life skills just as every predator in the litter learns to wrestle, stalk, hide, and sprint in preparation for life.

Second is a connection to place. Every child needs a connection to a natural place she or he gets to know intimately. From that "home place" a child expands home range through exploration and reflection time to build mental-sensory maps and a connection to the natural systems in his or her bioregion. All learning is place-based. The rich diversity of place has a huge impact on learning. Typically, urban children know about a one to four square block area well, while rural children may experience a half to a mile radius with intimate detail.

A third dimension is learning to recognize specific plants and animals by call, by behavior pattern and ultimately by name (Kellert and Westervelt's research indicates that children who know eight or more bird species in the field will have a measurably more positive attitude toward the environment). We all feel more comfortable at a party when we know some of the other guests. The intimate knowledge of a place affords a child a sense of security and self confidence just as it does with the indigenous peoples of the world.

A fourth dimension is the development of a natural systems ethic, of environmental responsibility to conserve, to restore, to respect, care for, and love the land by being aware of the consequences of choices and making choices that ask the question, " If I do this, what then will happen?" Learning to help sustain the environment through respect and responsible behavior is a critical end. We must not scare children with negativism and guilt or ask them to save the planet. We learn from experience and modeling the consequences of one's actions in ways that build insight into the need to consider consequences in advance of taking action.

The most difficult thing to provide children in the daycare setting seems to be time to watch a raindrop slowly puddle on a leaf and then form a hanging drop at the leaf tip... to watch gravity build its influence on pulling the droplet from the leaf into its force within the waiting earth.... slowing watching as mass grows... and gravity pulls.... trying to guess the very instant gravity will make its grab, discovering the droplet is a fisheye lens in which everything is upside down! Also the challenge of providing insightful, skilled leadership, time for children to reflect and explore places that provide the opportunity, safe nurturing natural spaces to carry out the various elemental components of this theory, opportunity for deep play and solo experience outside the crowded play areas of the typically crowded day care facility.

We have engaged in early tests of this theoretical construct by experimenting with the nursery rooms holding six-month-olds in cribs by painting the white ceiling tiles to look like the canopy of an oak hammock against the sky, of playing CDs of the native birds and local insect and frog chorus rather than just canned music

and the rumble of trucks on the highway as a way of imprinting infants on our native sounds of nature. We have created tumbling waterfall streams in miniature for children to play in and catch local tadpoles and other critters to stock their pond and streams with. We garden, play hide and seek in the tree plantings and nearby landscape. We have designed, but not yet built, a toddler's boardwalk through the wetlands and palmettos, recognizing that a tunnel through a palmetto shrub is canopy and adults must scoot through these locations on garden carts. We continually strive to carefully craft a developmental palette of Nature-based experiences that strengthen a learner's connection to Nature and that "bond" them to that natural sense and place within the framework context of a Theory of Bonding Children to Nature.

From this experience children learn from Nature sensorial, insightful personally constructed lessons that cannot be learned any other way in any other place. Children also learn about Nature from not only her or his experience, but from a wide multiplicity of other sources, including adults, peers, and from Nature based stories and myth. Children also learn lessons from Nature that are good models and guides for learning to live their lives in a thoughtful, sustainable, and balanced manner. From Nature children learn character attributes that will serve them through a lifetime.

All photos courtesy of Rod Hawkes

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Harvest

By Maxwell C. Wheat, Jr.

Saturdays, I'd hire out to help Grandfather in his orchards,
But always kept binoculars ready for migrating hawks
Thermalling above gold and scarlet hills.
I should have been giving more attention
To the bushel baskets waiting to fill up with apples.
Nothing was better on sharp blue days
Than the *crrraack* of Macintoshes I'd bite into.

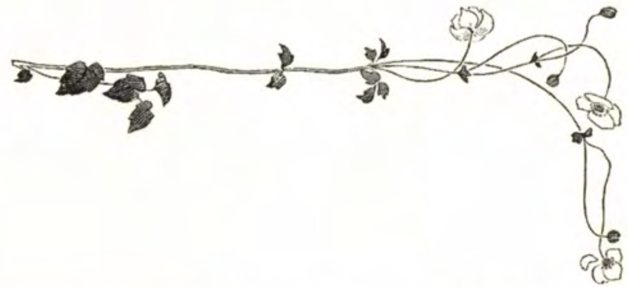
"You're eating up all the profits," Grandfather would scold,
leaning from his ladder into branches of clinging fruits.
I'd see him trying a "Mac" – or a Bartlett,
Savoring the granular sweetness of the yellow pear.

Sometimes there was Grandmother
Hurrying into her little vineyard,
Filling a wicker basket with Concords – and smiling.
She'd see me holding bunches by the stems,
Plucking grapes with my mouth,
Seeing how far I could spit the skins.

In October, at the stand by 53rd and Lexington,
I look for these memories in separate bins.

Netting Wings... and More

by Margaret A. Barker



My environmental roots can be traced in large part to an early obsession. What made me happiest as a child was to spring from my Tennessee home on a warm, sunny day and head out in the neighborhood armed for a chase with my net—my trout net. I bounded from yard to yard, my trout net high in the air.

During long summer days at my grandmother's big house, I'd be out the door early to the meadow, scooping the flowers. For hours I'd run and pounce through dew and burrs and grass. With dime store fishing equipment, I sought color and beauty and wings. I loved the thrill of the hunt and the dissection of the spoils. Catching butterflies was my passion.

Young Margaret

In those childhood hours, I chased pretty insects and learned to love the out-of-doors. Butterflies lured me to cool woods and mossy-smelling places, to briars, flowers, open fields. They tantalized me so, I'd search for wings anywhere. I'd make the rounds of neighbors' patio lights for "morning after" ruins of flying beings, those who'd bumped too close to the flame. I'd search parking lot cars for "grill kills." One day from the front of the fanciest car I'd ever seen, I slowly peeled away a prize: a near-perfect Luna moth!

I traded my chance to bedeck plastic dolls for rendezvous with dressed-up gaudy bugs. I drew butterflies (and moths), daydreamed butterflies (and moths), devoured books on these winged lovelies and yes, killed them for my collection.

I don't remember that it bothered me at age nine to push my catch into screw-top jars of poison-soaked cotton. I didn't watch. I'd leave and return when the wings were still and I could finally get an unfluttered look. Then, carefully, I'd pin the bodies and wings to waiting spots on the mounting board, spaces already named.

I can't imagine collecting and killing today. To catch the sight of colorful wings now satisfies my heart. My soul seeks butterfly trysts in the warmth and light of soft June days. That's what I aim to capture now, the wonder of life and wings. That's what I'm hoping to share.

Margaret today

Photos courtesy of Margaret Barker

Beginnings/Nature Study

by Helen Ross Russell

I was born curious, a nosy child, but that describes all healthy babies.

We watch them explore the world around them. We watch them turn their heads toward their mother's or other caregiver's voice, and we see them cringe at a too loud sound. Their hands are constantly exploring. Smell and taste appear early. We watch and rejoice as their eyes focus.

Their first speech, usually "mommy" and "daddy" is quickly supplemented by "Why? When? Where? How? Whazzat?" When I was three, my "Baby Brother Billy" was a year old and mother was again pregnant. She was a city girl, a former church secretary and church visitor. When my father decided to be a farmer, she was transferred to pumping water and heating it on the stove, to an outdoor toilet, to kitchen stoves that burned corncobs, wood and, in winter, coal. All these had to be carried in and then carried out as ashes.

So thirteen year old Anna came to live with us. She was one of a big family of children whose father put them to work on farms as soon as possible. Anna was too young to stop school. One of her class requirements was to make a cigar box collection of insects. I was her primary assistant. Day after day I would turn over the planks of the boardwalk looking for new insects. One day I was amazed and startled to see a stag beetle. I put the board back in place, (a lesson my father taught me) and waited for my father's return. I greeted him with "There's a big pinching bug under the boardwalk."

He said, "Let's look."

I flipped the section of the walk over and it was still there in its beetle shaped depression. Dad stooped over and picked it up with thumb and forefinger on each side of its thorax.

He said, "When I hold it this way it cannot pinch me. You can pick up any insect, except stinging ones, this way and be perfectly safe. They cannot turn their heads and reach you."

We looked at its eyes, its pinchers, its shiny brown wing covers that made it a beetle. Dad turned it over so we could look at the segments of its body and its legs which were busily kicking. He told me that it was a stag beetle and asked if I could tell him why it had that name.

"Have you ever heard the word stag before?"

"Yes, the picture in our hall is call 'Stag at Bay'."

"What is the picture?"

"A big deer with antlers. Oh! Oh! I know! Its pinchers look like the deer's big antlers."

"That's exactly right."

He did not tell me that they were used to hold the female in mating. Sex education was definitely not a part of early childhood education.

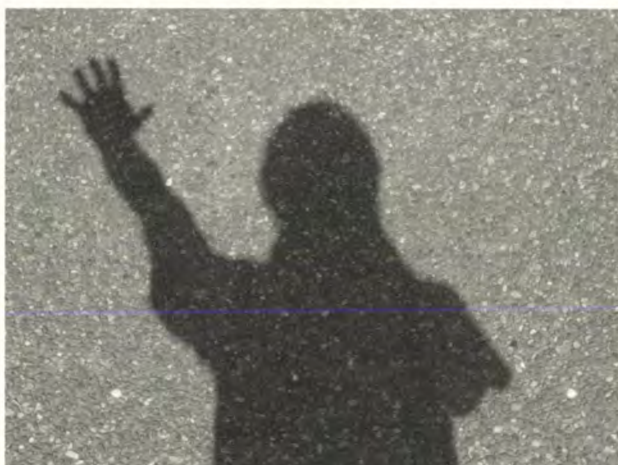
On another day I found a molted cicada skin on the trunk of an apple tree. I dashed into the house calling, "Mama, mama, there's a monster down in the orchard!" She laid her bowl aside and accompanied me to the orchard.

As she gently removed

the skin from the tree, she said, "This is not a monster, it is the empty skin of a very special creature that started life as an egg on a twig of this tree, or another near it. It hatched and dropped to the ground, and lived underground for 17 years, eating juices of roots. It grew from a tiny dot to the size of this skin – and as it grew, its skin got too tight and split down the back time after time. Each time it crawled out with a new soft stretchy skin that got tough after a day or two. This time the little beastie had wings and flew up to the tree top. This is just like the snake skin that Daddy found last week."

"All living things shed their outside cover, some do it one piece like snakes and insects. Others, like frogs and people, do it in little pieces. You can see your worn out outer skin peeling off your arm or floating on top of the water when we wash for supper. Soon there will be many of these empty skins on tree trunks and we will hear a loud singing sound in the tree tops. We call these 17 year locusts. In a little while they will lay eggs in the trees and die. The babies will hatch and drop to the ground and disappear. Maybe if we watch we will see a 17 year locust shedding its skin. (It would be 68 years before I actually did witness this when I found a nymph emerging from the ground in our Jersey City backyard, and took it indoors to watch.)

On another occasion, I dashed into the house to report that I had a big black thing following me and I could not get away from it. Again



mother put her work aside to go out with me to look at shadows and to tell me that there was a poem about shadows that she would read to me when I went to bed that night. Ultimately, I not only memorized Robert Lewis Steven's poem, "My Shadow", I memorized the entire *Child's Garden of Verse.*

Mine was a constant on-going learning process about the natural world. It was Dad who taught me another important generalization.

My childhood predated plastic bags, as well as large brown craft ones. People carried shopping bags and grocery orders came home in the empty cardboard or wooden boxes in which the grocery stock had been delivered to the store. We did not have a lawn mower. The backyard was covered with white clover. My brothers and I would take a wooden box to the yard, look for a spot with many bees, and drop the box over them. They protested loudly, and we would put our ears on the box and listen to their angry complaints. After several minutes, we would knock over the box and run. Of course, the bees, given their freedom, wasted no time following us but instead went back to the business of gathering nectar and pollen.

One day Mother told us that when she was little she and her friends trapped honey bees in hollyhock blossoms by pulling their petals together then carefully breaking the flower off the stalk. The trapped bee was unhappy and you could hold her up to your ear and really listen to her protest. This took more concentration and coordination than the wooden box trap. It offered a real challenge and I repeated the activity many times, listening, then tossing the hollyhock in the air. Once released, the bee, just like her sisters under the wooden box, took off immediately.

How often did I do this? I have no idea. I can remember days of tossing pink, red, yellow

and white flowers and watching the bee take off. Then one day my fingers were too close to the bee and she stung me! I howled in protest. My father said, "It served you right. She was defending herself. I hope that if anyone ever tries to pick you up, you will defend yourself. Let's talk about what you can do."

A mighty good lesson on two counts. I have rarely been injured by any animal because I know the rules, and respect them.

As I listen to parents today saying, "Ugh", "Dirty", "It will bite you", "Gross", "Don't bother me." Or hear them telling people what a cute, bright, silly, stupid thing their young child did, I think how fortunate I was.

I also wonder how my mother knew the things she did and could say, "Let's look."

When I found a gall on Creeping Charlie she said, "I don't know what this really is, but

often bumps like this have a white grub in them. Let's cut it open and see." She taught me that cheese mallow was edible and though I did not enjoy them as a nibble, I routinely collected the little fruits and "cooked them" in a cast iron pot on my cast iron stove for my dolls.

It was consistently good teaching. Did all mothers have that kind of knowledge? Not really.

Mother came home from a trip to Lebanon one day laughing with a woman with whom she had shared a seat on the trolley car who told her, "There's a new family in this community. The kids collect bugs and the mother helps them set up a back porch zoo in jars. Everyone is talking about them."

Mother had a one year post-high school course which qualified her for teaching primary grades, but I seriously doubt that it had anything to do with her biological knowledge. She never taught school, but she not only taught her children, but all of my cousins who came to the farm were exposed to the same kind of learning.

My father, the son of a pharmacist when medicines were largely made from plants, had grown up hiking in the Chatauqua grounds of Mt. Gretna with his father and his father's friends, Clarence MacIlvane, author of *1001 American Fungi* and Dr. Samuel Christian Schmucker, the sixth president of American Nature Study Society and professor of biology at West Chester State Normal School (now West Chester University).

Long before I could read someone gave me Chester Reed's 3" x 6" Bird Guide. I carried it around and excitedly identified the birds that nested or passed through the farm. My parents helped me by reading the names. Eventually it fell apart, victim of use and occasional exposure to dew and even rain.

When the National Geographic arrived featuring weeds, Mother said, "Let's take it out and use it to identify the weeds we've been pulling." For us that was a fun experience, but the special event was discovering that the small yellow mallow with the soft heart-shaped velvety leaves, which we had called velvet leaf, was also officially named that! Not surprising, but gratifying. Many plants have common or even scientific names that describe them.

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Another book of my childhood was a 3" x 5" book of life sized colored beetles. The center spread had a Hercules beetle extending all the way across the two pages. Its asymmetrical pinch-

ers made up half its body length. I was young enough to believe that that if I searched in the right places I would find it. After all, the book had many beetles that I had seen, like the beautiful red longhorn milkweed beetle with black markings, and the black locust longhorn with yellow zigzag patterns, and the navy blue and orange elderberry longhorn beetle. And, of course, the thousands of potato beetles that we shook off the potatoes into kerosene, and the handsome grape scarab with polished shiny buff wings with three black dots on each side that occasionally interrupted our evening meals in early summer.

If all these were insects I had seen or collected, why would the Hercules beetle be any different? Eventually I learned that the Hercules beetle was found in tropical rain forests, but in the meantime I had investigated untold numbers of insect sites and found and learned many new beetles and other invertebrates.

As we grew older, Sunday afternoon walks became a ritual. They were not see-how-far-we-can-go experiences, but see-how-much-we-can-discover.

I recognize the contributions that both my parents made to my knowledge and love of nature. Did my siblings respond in the same way? Yes and no. We were all four interested in the world around us.

When we were grown my brothers frequently called me for information but never became deeply involved in environmental protection, partly, I think, because they were two little boys horsing around with games and competition, while I was my father's star pupil. As adults, one brother went into mechanics and inventions, and the other into finance and investments, while I took every opportunity to learn and teach about the natural world. And I might add, learning and teaching are closely related.

My sister, Marty, nine and a half years younger than I, had less early childhood attention, but her interest in the environment was intense, as was her enthusiasm for teaching. From the time she was a little kid she followed me, learning and questioning. The circle goes on and on – as we teach children (and older people) to enjoy, observe and think.

The making of future ornithologists! Eagle Watchers, Canada 2001.

Photo courtesy of Helen Ross Russell

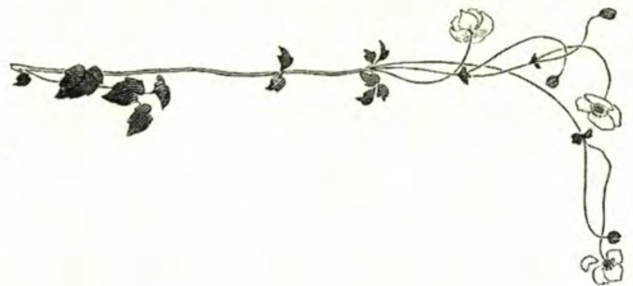
Holly
By Maxwell C. Wheat, Jr.

Every Christmas, Grandmother's door had a holly wreath I'd look up to,
Stomping my galoshes in snow,
The door opening to a crush of *Merry Christmases*,
To mistletoe over the staircase,
To a balsam fir filling the parlor.

"It Came Upon the Midnight Clear,"
Grandmother playing the piano,
Leaning back, head high,
Rallying us to "Deck the halls with boughs of holly…"

I loved her legends 'round the hearth,
Why the holly berries turned red.
She'd tell us,
"Holly means the sun is coming back."

Every Christmas, I place a holly wreath on her grave.
"The sun is coming back, Grandmother."



Many Years Later… Memories Not As Expected
By Betty J. McKnight

When asked to share my childhood memories of environmental experiences or encounters with the world of nature, I was surprised at what I discovered. I am a retired environmental educator who began my life in what was then, as I recall, the fifth largest city in the United States, Cleveland, Ohio. My mother had grown up on a farm in Pennsylvania and my step-father had come to the city from the real backwoods mountains of Kentucky. My parents, like a large number of the families of this nation, were struggling to survive the still lingering economic hardships of the depression. We lived in several very integrated neighborhoods before moving to a small town in New York State. The inner-city schools (of course they were not yet called that) probably had an admirable curriculum compared to any other school at that time. Our classes were taken to the Cleveland Symphony Orchestra programs and we saw the artifacts from the tombs

of Egypt several times. We got to the Cleveland Zoo where my only really vivd memory is of one gigantic snake that had swallowed about twelve inches of another gigantic snake, starting at its head. As we little kids watched spell bound, a zoo keeper came over with a stick that looked like the teacher's pointer and tapped the outside snake on the tail. And rather quickly it began inch by inch to spit up the cage-mate he had been trying to eat for lunch. This was such an awesome experience that to this day I do not clearly recall any other details of that trip.

Nature education seemed not to be in the curriculum, just zoos, symphony music and museum walks past the mummies of far away Egypt (wherever that was). There was no discussion of a tree, bush, flower, bug, or bird. Not even the monarch, the grasshopper, nor the robin. We had quite a few brown birds; no one seemed interested in them. There was no doubt many birds of many colors, shapes and sizes but even the kids didn't see or talk about them. Oh, we did see pigeons in front of the Museum of History, but we didn't look at them to see what they were doing.

When I was seven we lived in the downstairs of a two-family house. We had a tiny pie shaped, fenced-in yard. It had one tree, which was small enough to climb and I was delighted when a neighbor gave me a worn out pair of coveralls, which belonged to her son. Girls didn't have jeans and it seemed very unfair because we couldn't climb trees or do other neat things. With coveralls, I could now climb this tree and not show my bloomers, which although they matched my dress, were a great disgrace to have showing. It was not until I was in a Field and Natural History class at Cornell University, as a graduate student, that I learned the real name of this backyard tree of my childhood. Surprisingly, I recognized it on the college field trip by its smell, and not by its appearance. We were told that it was *Ailanthus altissma* (more commonly called "the tree of heaven"). This is the tree in the story called *A Tree Grows in Brooklyn*, and if you grew up in almost any city, you probably know this tree by sight, if not by name.

This tree was to give me great joy in my adult life. After I learned its real name I looked for it everywhere I went, and, more often than not, I found it everywhere I traveled. It is perhaps the most common tree that pops up along busy highways, in industrial neighborhoods, and vacant lots. The tree is in the village of Ellenville, New York, where I attended junior high school, and still did not learn anything about nature. A few years ago, I saw it in China and was told it had come to the Western Hemisphere from the Orient. It is a survivor that one cannot help admire for its tenacity.

Although no one that I can recall had ever called any trees in my neighborhood by name, I guess where I lived in the 1930's and 1940's people were preoccupied with other things. I suspect many of them knew quite a lot about trees from their parents

who may have lived in rural areas and gathered black walnuts, pecans, hickory nuts, and chestnuts to supplement the family diets. Some of them may have even helped tap maple trees as young children living in rural areas. But in their migration to the city, their attention had turned to other matters and their family knowledge about nature and its wonders was lost to their children.

Today, in my collection of old nature books, I can see that trees and other plants had previously been in the curriculum of the public schools. Even way back in the 1800's, quite sophisticated books on botany were written for public schools.

How young was I before my experiences with living things and the non-living things like rocks and hills and lakes and streams, began to tell wonderfully interesting stories to me? Not nearly young enough! How do I feel about this? I think it was a terrible loss of opportunity. The greatest gift, next to belief in a god, is an awareness of the stories to be learned about how this Earth we are bidden to care for works.

Memory

By Maxwell C. Wheat, Jr.

I was six years old
When my mother showed me
Two egrets in December
Obscured by snowfall
Except for a yellow foot of each
Suspended above the creek.

Late Nineties Agriculture

By Beth E. Waterhouse

The lilac hedge was the last to go.
They were gonna leave it,
But it looked so melancholy there
In the middle of the corn.

Wrapped a chain around half of it
The old tractor ripped it open.
Roots everywhere, soil flinging wide
There, in its core, a tiny nest of sorts.
And something shiny.

The young driver,
His eye caught by the glinting,
Got down off the rumbling tractor,
To get a closer look.

Inside the little cubby,
A shred of old blue rug,
A three-inch aluminum tea pot,
And tiny upturned cup,
its saucer jutting out of the soil
Reflected spring sunlight.

A child's secret place,
Abandoned mid tea-party
Like her grandparent's homestead
A loose stack of memories
At the edge of the corn.

The next April
Near the roots of that old hedge
A twisted hunk of swing set sprang up.
One pole,
One hook,
One sprig purple lilac,
Rising toward the morning rain.

Book Review

How to Take Your Grandmother to the Museum

By Lois Wyse and Molly Rose Goldman

Illustrated in color by Marie-Louise Gay • Workman Publishing Company Inc. NYC, 1998

Helen Ross Russell, comments

For fourteen years I have taken my Kenyan-Nigerian "grandchildren" on individual birthday trips, starting when they are four years old. These trips have included the top of the World Trade Center, The Brooklyn Children's Zoo, The Aquarium, The New York Zoological Center in the Bronx, and, for Larissa Helen, born in November, the Nutcracker Suite. And, of course, there have been several trips for each of them to the American Museum of Natural History. After all, the reality is, that neither grandmother nor grandchild can cover that entire Museum in one trip.

When the book, *How to Take Your Grandmother to the Museum* came for review I was delighted. Over the years I have been invited to accompany "my kids" to school plays, holiday celebrations and art shows. In addition, there have been requests, "Could we celebrate my birthday by going to the Space Exhibit at the Museum?" or "Leo says the Franklin Institute was a really neat experience. When can I go?"

Because of this I decided to ask Leo and Mark Robert to evaluate this book.

Review by Mark-Robert Mahaga-Ajala, age 10

I think the book was fun to read. It was great to have gone to the Museum of Natural History not long ago, and then read about the same place in a book.

The book was also good because it was different. Most of the time the grandmother takes the child to the museum. And usually the child is learning from the grandmother. But this time it's the other way around. The girl in the story takes her grandmother to the museum and the grandmother is the one learning.

I recommend this book to anyone who likes to read, to learn, and to have fun.

Review by Leo Mahaga, age 14

Molly prepares her grandmother for the trip by telling her to wear sensible shoes and go to the bathroom before they leave.

As Molly takes her grandmother through the museum, she tells her about each and everything she learned earlier, from dinosaurs to present-day animals, from animals of the sea to animals of the Arctic.

As they explore the building they pick up unusual facts at each exhibit. This is especially important because children will be able to learn many things from a book that not only entertains but also informs. In addition, the photos of the dioramas that are included in the illustrations give a realistic view of the exhibits.

I would recommend this book to any child, or, for that matter, grandmother.

Educator Tip

Common Volunteer Plants

By Helen Ross Russell

Take a survey of your family and friends familiarity with common plants in the lawns and along the streets.

The objective of this activity is to increase peoples' awareness and interest in everyday plants. Try to get several kids, adults, or better yet, families interested in sharing their discoveries. If it turns out that few, if any, people can tell you even six common "volunteer plants," the kids and adults can form a neighborhood teach-in task force. Why would you want to do this? You will not miss what you do not see, and often you will not see until someone starts you on the road to discovering the important ecology and fascinating processes that are going on around you. Does it really matter? You bet it does. This is not a frivolous activity. You can neither enjoy nor protect an environment that you haven't made friends with.

You will probably know one and discover many more. Knowing a few common volunteer plants will give you some old friends to look for in any state of the country you travel to. This could be a scavenger hunt, with a sample of each of two or three plants given to each team.

- Does any animal use them for food?
- Were they once cultivated?
- Who plants these plants?
- Where do they come from?

Here is a possible list to start with:
common dandelion
(everyone needs to have at least one success)
broad leaf plantain
pepper grass
burdock
hawk weed
daisies (How many kinds? Look closely.)
common mullein
teasel
chicory
mustard (How many kinds?)

I wish someone had started me on such an adventure of discovery before the age of five or even fifteen. It didn't happen until I was 23 years old. And it could well not have happened at all if my several thousand graduate students are a fair sample. (Try this with your kids or students.)

Naturalist Notebook

A Tiger Swallowtail breaks out of its chrysalis

By Robert M. McClung

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