



April 7, 2022

TLC to Receive a Grant from Port Huron-based Bioregion Reparation Fund Southern Lake Huron Coastal Park Burtchville Township, Saint Clair County

The Thumb Land Conservancy has received notice that it was approved for a grant of \$4,500 to construct an informational kiosk at the Bidwell Sanctuary, part of the Southern Lake Huron Coastal Park. The grant will come from the Bioregion Reparation Fund via the Community Foundation of Saint Clair County.

Sister Veronica Blake and Sister Concepción González, who are well-known members of the Blue Water area environmental community, initiated the Bioregion Reparation Fund in 2018 in order to carry on their legacy of ecological education, spirituality, and restoration in the bioregion defined by Lake Huron, the Saint Clair River and the Black River watersheds.

The fund was created under the auspices of the United States Region of the Sisters of Mary Reparatrix, an international religious congregation to which Veronica and Concepción belong. Since its founding in France in 1857, the Sisters of Mary Reparatrix have been dedicated to repairing fractured relationships among humans and with God. In the second half of the 20th century, global environmental crises caused them to also focus on the need for humans to repair their relationship to the Earth.

Veronica and Concepción came to Port Huron in 1987. Veronica hails from Manhattan, New York City. Concepción was originally from Camaguey, Cuba, and had served in Peru and Colombia previously. In 1990, they established the Full Circle House of Prayer in Port Huron's South Park, where they began offering spiritual retreats and workshops. Soon after, the sisters started SWAMP, Savers of Wetlands and Marshy Places, for youngsters eight to

twelve years old. Monthly gatherings, field trips and projects helped the children mature into adults who care about Earth and its ecosystems. Over the years since, they have focused more and more on the integrity of *all* Creation. They acquired a second house in Port Huron, naming it the Full Circle EcoHouse, and they have interacted with and supported many other local environmental groups.

The Bioregion Reparation Fund grants are awarded in alignment with Full Circle's ecological guiding beliefs:

- Earth Community is an interconnected web of life.
- Life within the web is sustained by diversity.
- Every creature in the web deserves respect.
- Justice and peace are integral to the life of the web.
- Compassion toward all leads to healing and reconciliation.
- Creation tends toward communion whose ultimate expression is love.

The kiosk at the Bidwell Sanctuary will be constructed at the entrance and parking area at Metcalf Road, and it will provide information about the sanctuary's ancient beach ridge and swale ecosystem, plans for the Southern Lake Huron Coastal Park, the Bioregion Reparation Fund, the Blue Water Indigenous Alliance, and the TLC.

The Bioregion Reparation Fund is a "donor-advised fund" administered by the Community Foundation of Saint Clair County, with grants awarded based on recommendations from an advisory committee consisting of Sister Concepción, Sister Veronica, and five other members from the Blue Water area. More information about the fund and the work of Full Circle EcoHouse of Prayer can be found at: <http://fullcircularretreat.org/bioregion-reparation-fund/>. Donations to the fund can be made online at: <https://www.stclairfoundation.org/fund/bioregion-reparation-fund> or by sending a check to: Community Foundation of Saint Clair County (CFSCC), 500 Water Street, Port Huron, Michigan 48060. Write "Bioregion Reparation Fund" in the memo line. Add the word "spendable" if you wish your gift to be available immediately for current projects.

Duthler Ridge Sanctuary

Dryden Township, Lapeer County

In 2020, the Thumb Land Conservancy set a goal of protecting at least one natural area in each of the six counties we serve in the Thumb. Our new Duthler Ridge Sanctuary in Lapeer County, acquired in April of 2021, put us one step closer to realizing that goal. Duthler Ridge Sanctuary in Dryden Township is located in a beautiful area along Lake George Road just a few hundred feet north of the Oakland County border. The sanctuary is located on a narrow ridge on the east edge of a huge forested valley, nearly 1 mile across and 2 miles long, with a series of lakes and wetlands at the bottom. It feels like the Smokey Mountains, part of one of the most impressive landscapes in southeast Michigan. Some areas along the Black River and Huron River valleys are close, but not the same.

Surveyor Rick Duthler of R. A. Duthler Land Surveyor (DuthlerLandSurveyor.com) became the TLC's first private lender in 2021, enabling us to buy the property. Thank you again Rick! The TLC just named the sanctuary in your honor.

Although the sanctuary is located in a relatively untouched natural area, there was an old cottage on the adjacent property which allowed a few invasive plants like Black Locust and Tartarian Honeysuckle to spread. There was also a little bit of junk. We took care of it last spring and summer so now you would hardly know. This little sanctuary is a great place to sit on a boulder, look out over the valley with Brooks Lake shining below, breeze in the treetops, distant birds calling, and feel the solitude.



View southwest to Brooks Lake.



View southwest from the boulders.



Rick Duthler surveying a site in Saint Clair County.

Huron County Project

The TLC will soon be working with landowners to protect 40 acres in Huron County. The land is a mix of swamp, upland forest, shrub thicket, wet meadow, and old-field in the Willow Creek watershed which flows to Lake Huron at Huron City about 3.5 miles southeast of Grindstone City. The forest is part of one of the largest and least fragmented tracts near the top of the Thumb and important to maintaining sustainable forest habitat in the region. With so many stresses on pollinators in recent years, protection of even upland old-field is increasingly important. We will give more detail as the project develops.

Spring Stewardship Projects

Spring stewardship time is upon us again. Winter seems to drag on until suddenly, we need to rush to keep up. Specific dates will be announced in upcoming e-mail notices and on our web site. If you want to work on your own on any of these sites, let us know.

Southern Lake Huron Coastal Trail

Chèkhònèsink hìtkwike schind lèkuwake - *Place among hemlock trees on sandy ground where there is sound of waves breaking* – Lenape

We continue building the coastal trail through the north part of the Bidwell Sanctuary in Burtchville and will soon be creating a loop trail back down to the entrance. The work consists mostly of cutting shrubs and small tree saplings with hand pruners. We will also be constructing an information kiosk at the park entrance this summer.



Work continued on the Bidwell Sanctuary in Burtchville Township through last fall. Jack McLiver, owner of Lake Huron Lawns in Lakeport (LakeHuronLawns.com) did a great job clearing and mowing the sanctuary entrance, what soon will be a trail head for the coastal trail. Jack is a friend from Scouting and gave us a good deal, not only on the Bidwell Sanctuary, but also on mowing our North Street Station in Clyde Township.

Deerfield Preserve Barberry Control

We'll soon start our spring cutting and burning of invasive Japanese Barberry on the Deerfield Wind Energy Preserve near Port Hope in Huron County. Barberry is most vulnerable to removal in the spring when it is most dependent on energy reserves stored in its roots over the winter. We start removal in March if weather permits and end in early May to avoid damage to native spring ephemeral vegetation.



TLC stewardship assistant, Justin Peltz, burning barberry on the Deerfield Preserve. To the right of Justin is the south end of our work area. To the left of Justin is barberry that we have not yet burned.

Dead End Woods Sanctuary Garlic Mustard Removal Makadewagmitiggweyainniwak - *Black River tribal people* – Annishinaabemowin

Thanks to the work of many volunteers, we have shown invasive Garlic Mustard who is boss in our Dead End Woods Sanctuary in Fort Gratiot. It looked impossible back in 2009 when we started, but we have nearly wiped it out across the south side of the preserve. Prime time for Garlic Mustard removal is late April through early June when it starts to seed out.



Volunteers from the Christians for a New Tomorrow Church (CantMinistries.org) with bags of Garlic Mustard they picked in 2020.

TLC Member Profile

Christine Powell, Bern Smith, and Bess Touma

Washington, DC

Our supporters are very important to the continued work of the TLC, but not all of them are local, at least not in recent years. Christine Powell, Bess Touma, and Bern Smith, live in Washington DC. Twin sisters Chris and Bess grew up in Port Huron on Lake Huron. Their father, Dr. George C. Touma, was a local dentist in Port Huron. The Touma family comes back from time-to-time for family reunions, so they keep current on what is happening in the Port Huron area. Bern, who is married to Chris, has spent his life in property restoration in

the San Francisco Bay Area, so he was immediately attracted to the work of the TLC.

Chris, Bern, and Bess were introduced to the TLC through an article in the Port Huron Times Herald in 2020 about the Bidwell Sanctuary acquisition and the Southern Lake Huron Coastal Park project, and reached out to the TLC for more information. After several phone conversations and email correspondence with Bill Collins, the Executive Director of the TLC, they made the decision to financially support the work of the TLC since they cannot be here to help in-person. They thank all the volunteers for spending their time and experience to protect and restore natural areas around Port Huron and provide for visitor access. They are proud to be a part of an effective and impactful organization and look forward to working together to protect the natural heritage of Michigan's Thumb region.

Bess, Chris and Bern are attuned to the natural environment through hiking, cycling, sailing and birdwatching. They feel it is important to preserve what is left of our natural environment, and thus are volunteers at The Tregaron Conservancy and Rock Creek Park in Washington DC, and with The Marine Mammal Center in California. Bern has also been involved with building public trails and provided the TLC with advice and references to help with our Southern Lake Huron Coastal Park Trail.



Bern, Chris, and Bess

The TLC thanks Bess, Chris and Bern for their support and encouragement, which is very much appreciated.

Sandhill Crane, *Antigone canadensis*

By Tom Dennis

Sandhill Cranes have recently been plying the local skies as they migrate to their breeding grounds and they have also been in the news the last couple of years with some of our Michigan State Senators pushing for legalized hunting of these birds. I believe that the scientific, economic, agricultural, and ecological facts haven't come to the forefront of appeals in support of this bill. Let's take a look at these stately birds, with my admittedly biased, balanced view (is that possible?), and then we can better decide their future.



Sandhill Cranes photograph by TLC board member and friend Chris Walker.

The Sandhill Crane is indeed stately. It stands tallest amongst all of our local bird species, often as tall as six feet. It weighs in at ten pounds, and has a 6.5 foot wingspan. The plumage is gray overall with the exception of the head, with the crown being gray in the back and sporting a bright red cap that extends forward to the black, dagger-like bill. The throat and cheeks are white. The legs are black and the wing tips (primaries) are dark-gray. The short tail is covered by drooping feathers that form a bustle. In flight the long neck is fully extended as are the long legs, both at a slight downward angle, a feature that distinguishes them from other large flock migrators such as swans, herons, and egrets. As large as these birds are, they are often heard before they are seen. They make a loud bugling call reminiscent of swans but the similarity is lost completely on the accompanying rattle-like “kar –r-r-o-o-o” call. I’m reminded of a trip to North-western Indiana where Laurie and I visited a well-known bird sanctuary that is a wintering ground for cranes. The visitor center volunteer’s suggestion to see the cranes was simply “follow the sounds”. The thousands of cranes were easily heard from a distance of over two miles!

These social birds live in pairs or family groups throughout the year but during migration and winter, unrelated individuals come together to form “survival groups” that feed and roost together. These group sites are well-known in Florida, Eastern Tennessee, and as mentioned above for the Indiana gathering. The groups at times have congregants numbering in the tens of thousands. The Sandhill Cranes we see in Michigan are a unique population that breeds in every state and province that surrounds the Great Lakes and also extends into Quebec. Preferred nesting sites are usually marshes and other open wetlands though occasionally dry land such as pastures is chosen. These individuals migrate through, and winter in, a very narrow band of states that is exclusive to Indiana, Kentucky, Tennessee, Georgia and Florida (a relatively narrow flyway). Cranes readily eat cultivated foods including corn, wheat, cottonseed and sorghum but their diet varies greatly with breeding adults and young feeding on berries, small mammals, snails, reptiles, insects, and amphibians.

Like many large birds, Cranes are fairly long-lived. However, they take four to five years to mature into breeding adults. The pairs typically raise one chick per year but like most birds in the wild, survival rates are poor. The latest survivability records for the Wisconsin breeding population records a drop in survival from 0.7 chicks per pair in 1992 to 0.4 chicks per pair in 2006. This is a dangerous trend for a bird that was on the endangered species list less than one hundred years ago! Sixteen American states allow hunting of this migratory bird that had the unfortunate fate of being classified as a game

species.

I understand the concern of crop loss from pests, both sets of my grandparents were farmers. Michigan farmers are allowed to apply for a permit that allows them to remove pest birds. There are however alternatives; a seed coating is now available and it renders corn inedible to Sandhill Cranes while keeping it safe for human consumption. Farmers actually benefit when they use this product as the birds remain in the fields consuming large quantities of mice, insects and insect larvae that are otherwise costly and environmentally dangerous to control. Hunters undoubtedly support conservation through license fees as do conservation groups such as Ducks Unlimited, who I proudly support but, wildlife watchers are now a larger and growing, wildlife support group. Nebraska refrains from appeals to open a Sandhill Crane season and they now benefit from ecotourism groups that come specifically to watch the western migration. These tourists spent \$14.3 million in 2017 specifically to see these magnificent birds. As of 2016 wildlife watchers in the United States outnumbered hunters 7:1 and outspent them 3:1.

I close with this mention of the genus of this bird, Antigone. A name you may recall from the famous Greek tragedy written by Sophocles in 441 BC. The central theme of Antigone is the tension between individual action and fate. Many animals have been adversely affected by human harvesting without thought or care in the process. Remember the Dodo, many whales, and even recently the Orange Roughy, a long-lived large fish that may never recover from overharvesting. We were given the creation for our use with good stewardship in mind.

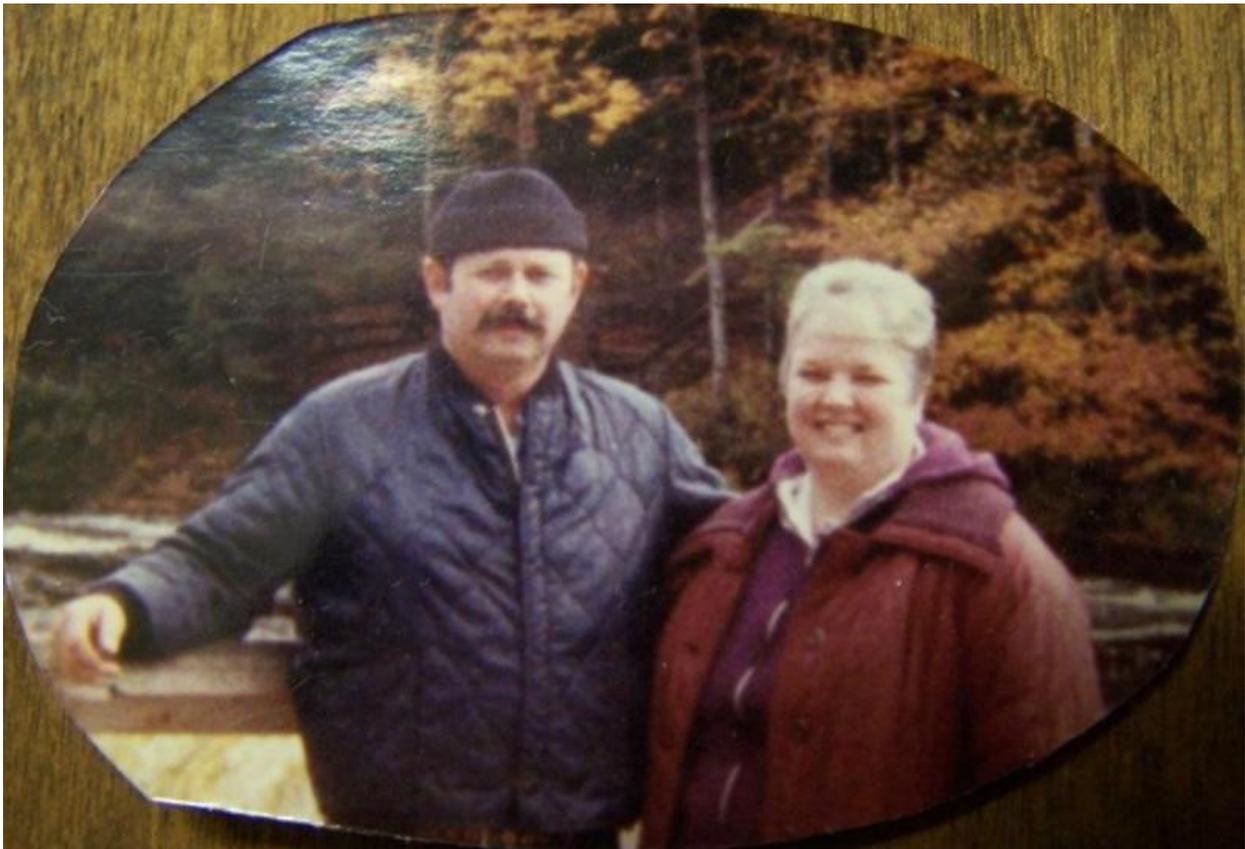
If you wish to learn more about birds you are welcome to visit the local Audubon Facebook page at ["Blue Water Audubon Society"](#). Please be sure to friend us. A site search under Sandhill Crane will lead you to the Society's position.

Thank you to TLC member and friend Tom Dennis for contributing this article. Tom is a free-lance writer, passionate birder, zoologist, creation scientist, and naturalist.

Robert Collins

By TLC Executive Director, Bill Collins

After months of dealing with long-term health issues, my father, Bob Collins, passed away in November. Where to start and where to end. My interest in nature naturally started with my father and mother who both nurtured my curiosity. Whether they meant me to go as far as I have, I'm not sure. It's kind of strange now to think that I knew my parents when they were in their late 20's, when they were still essentially kids. I thought of my father as the great hunter, the prepared outdoorsman, the woodsman, the scout who never was a scout, the excursion leader, the curious trespasser, the tree planter, the gardener, the horticulturalist, the cook, the frugal workingman, the craftsman, the mechanic, the machinist, the welder, the electrician, my math and science tutor - basically all the things I wanted to be. He was even our spiritual guide and remained so in his own quiet way the rest of his life. He demonstrated respect for creation in everything he did. He even gave my sister and I (my brother hadn't come along yet) our own copies of "The Way" Bible, a very 1970's version, like what might be read from at a church camp while everyone is sitting around a campfire and someone is playing a guitar. As I said to a friend last night, your parents pass away only once in your life, so this article is a long one.



My dad, Bob, and mom, Kay, at Tahquamenon Falls.

The Tree Planter

My earliest memories are from our first house in Port Huron Township, behind Rankin's Meat Market on Lapeer Road, which was originally Collins Brother's Hardware started by my grandfather and his brother. My father helped his father and grandfather Jackson build the house, which we called "the apartment" because it had a flat roof and was apparently supposed to be rented out. Plans changed when my parents got married and they suddenly needed a house. My dad planted a line of Arbor Vitae trees along the driveway, which probably came from a cedar swamp up North. Even at the age of 4 and younger, the trees and a flower bed full of pinks (Dianthus), which I can still smell, stay in my memory.

My dad's sister's family, the Strieter's, lived just across the field from us. My cousins and I played in a small plantation of young pine trees that my father and his father planted only about 6 years before I was born on my dad's lot near our house. I was no older than 4 or 5, so the trees were about 10 years old. They were mostly Red Pine with thick needles that would hurt slightly when we ran through them. My dad worked a few years for the local USDA soil conservation district and likely planted the trees using the same tractor-mounted planter that he delivered to landowners who rented it. The plantation covered part of a field that my great grandpa Jackson farmed until he split off lots for my dad and my aunt. There were still a lot of old-field plants like grasses and asters growing around the trees. My cousin Larry, who is about 4 years older than me, made a little house out of these field plants somehow woven or stuffed into a frame. I was impressed.

Back To The Garden

In 1968, our family moved from "the apartment" in Port Huron Township to our new house in Fort Gratiot Township. Aside from napping in the open trunk of my dad's red GTO and listening to cicadas while our new house was being built, my earliest memories from Fort Gratiot are of planting trees and planting the garden in the yard with my parents. My sister, Pam, and I each had a tree that we planted in a flower bed that were our trees. We had two gardens, one at our new Fort Gratiot house and one on my dad's Port Huron Township lot with the planted pines. I was fascinated to learn that garden plants, specifically radishes, flower and seed. My father rarely used any commercial fertilizer or pesticide in the gardens, and as he learned more, his methods became entirely organic. He was an unwavering practitioner of mulching to control weeds and, with our help, we had almost no weeds.

By mid-summer, our family ate from the gardens almost every day. A typical meal was a little meat, often venison from my father's deer hunting, corn on

the cob, boiled summer squash and onion, cucumbers with cut onions and dill in vinegar, green onions, radishes, and in our best years, fresh strawberries. Everything was organic. By late summer and fall, the pantry filled up with canned tomatoes, pickles, hot peppers, green beans, chili sauce, and later, beets, carrots, and bean soup. A cool spot in the garage filled with potatoes, beets, rutabaga, dried onions, garlic, and winter squash. We also had canned peaches, pears, and apples from my grandpa Collins' trees. My parents loved to have the pantry shelves filled up. My mother would open the pantry door to show us the filled shelves after a canning session and say, "Thy bounty" with a laugh.



Canned fruit from grandpa Collins' trees on our pantry shelves along with Geraldine the cat.

My father even grew a garden at Consumers Power in Marysville where he worked as a machinist from 1973 through 2003. Who plants a garden at work, at a gas refinery? Not only did my dad eat fresh tomatoes and other vegetables for lunch, but so did his friends. I know there was a lot of "government work" happening at Consumers Power in those days. The place was quite a contributor to the historical and cultural legacy of the community, including restoration of old cannons, a steam engine for the Saint Clair County Farm Museum, and stainless steel flag poles for Silver Trails Scout Reservation to name a few. Maybe it was "government work" or just his lunch hour during which my dad converted an old tool drawer into a multi-level growing chamber for new garden plants, complete with grow lights. The plant trays were set in the tool drawers which could be closed but remained lighted. He really had a grow operation going there at CP.

Along with gardening, my father inherited an interest in horticulture and most things related to home food production from his parents. He planted apple trees, cherry trees, and grape vines in our shady yard, which provided meager harvest, but there they were. My dad got into grafting different varieties of apples on a single tree, having learned from my grandpa Collins, an expert grafter. My dad even kept bees in the mid 1980's while I was away at Michigan State University. He was fully geared with hive boxes, a bee keeper suite, a smoker, and other tools he made himself.

We didn't have the internet back then, but thanks to my father and grandfather, I was introduced to old skills and new ideas through the complete collection of several references kept at our house, including the popular Foxfire books, Mother Earth News magazine, Organic Gardening magazine, Country Living magazine, and various guide books. By the time I went to college, Robert Rodale, prominent advocate for global organic agriculture, was one of my heroes.

Believe it or not, terrariums were the rage in the 1970's. It was a very different decade. Everyone suddenly had plants growing in clear glass or plastic containers in their house. Apparently terrariums fit with disco and shag carpet. My dad caught the bug and planted his own in a big glass drinking water jug. He made a wooden stand that held the jug horizontally, filled it with potting soil, and then inserted his plants using long-handled planting tools that he made from scrap brass so they wouldn't rust. It grew quite well until it was neglected after a few years to attend to other work. It still sits atop a piano in the basement. I made a few of my own versions with mixed success. Perhaps the most interesting was that I collected some swamp water from what would become the TLC's Dead End Woods Sanctuary years later. I kept the water in

a sealed peanut butter jar on my bedroom window sill for almost 10 years. I opened the lid only a few times and never added anything. Something was alive and moving in that water for the whole time I kept it, maybe water fleas and larger protozoans.

The Great Hunter

From about age 5, I followed my dad through the woods and fields as he hunted deer. I never hunted deer, but tagged along to explore and collect empty shell casings. We walked all over the Port Huron State Game Area. The one thing about hunting that took me a long time to accept was sitting still and talking very quietly if at all. But I had so many questions.

One of our favorite places to hunt was in the cedar swamps in the Pigeon River Country State Forest near Onaway. I loved camping up there, walking through the cedar swamps, seeing the Snowshoe Hares, which I hunted until I decided they were too easy to shoot, hearing the coyotes, which were not so common back then, and knowing there were bobcats, bears, elk, and maybe wolves out there. Upon returning to our camp one evening, my dad realized he dropped his hunting knife somewhere in the swamp. After supper we went back out into the swamp to find his knife. Our lantern light sparkled on the snow as we retraced our steps for a few magic hours down deep in the cedars. At one point, the tracks of a bobcat overlapped ours as though it followed us out of the swamp earlier. We never found the knife.



Dad at our deer hunting camp in the Pigeon River Country State Forest.



Mom, Pam, and me at our deer hunting camp in the Pigeon River Country State Forest.

We went deer hunting once in the Minden City State Game Area in northern Sanilac County, along the west edge of the Minden Bog. While driving out in the evening, we encountered a little Screech Owl sitting on a branch not more than 10 feet from my side window. My dad stopped the truck and it just sat there watching us watching it. That little owl has stuck with me.

Deer hunting is often not just about hunting, but as so many hunters say, it's about being outdoors, comradery, tuning out the rest of the world, and enjoying nature or feeling more a part of it. I know this was true for my dad.

Getting out also provided opportunity for interesting activities. Did you ever eat a meal cooked on the engine block of a pickup truck? Several times my father made grilled cheese sandwiches or hamburger and vegetables wrapped in aluminum foil. Back then it wasn't hard to find spaces around the engine to stuff foil packages and drive to the hunting site while lunch cooked. We even supplemented our meals a few times with carrots, beets, and apples from bait piles. I don't recommend this today because of the diseases carried by deer. Likewise, out in the farm fields we would munch on corn and soy beans left after harvest, but now with all the spraying and GMO crops, probably not a good idea.

If we wanted to take a break from hunting for deer, we switched to hunting for relics. My father often carried a metal detector he made from a kit and we explored places that might yield interesting finds, like an old railroad bed for hauling timber out of the swamp or an old foundation. We mostly found a lot of nails.

Hunting trips up North lent themselves to a lot of adventures without trying. One winter we were headed to our old camping spot in the Pigeon River Country State Forest southwest of Onaway. All of the back roads were glazed with ice and it was getting more difficult to haul our travel trailer up and down the low hills. We got caught between two hills with no way to get enough run to get over the next hill, and no way to back up. I thought we'd just have to camp on the road until the ice melted. My dad had the problem solved. He brought along a long-handled shovel. We dug below the snow at the edge of the road and found lots of sand. My dad knew that before we dug. We spread the sand in two tracks on the icy road and we were up the hill within minutes. I was impressed.

Dad had this magic thing in the truck called a CB radio. If you were around in the 1970's, you couldn't not know about citizen band radios. They don't exactly fit my theme here of nature and the outdoors, but in a way they do. These amazing radios provided a connection to the outer world through waves of electromagnetic radiation across the skies and into the universe. CB radio and my grandfather's short-wave radio, which my cousins and I would power up on holiday gatherings, let us eavesdrop across the world. Just on CB radio, we often heard people as far away as Jamaica and Mexico. CB radios were like smart phones of their day, but better in a way because they had only 40 channels and everyone was on one of those channels, not millions of web sites. Always remember, channel 9 is for emergencies. Also, CB radios don't require a monthly plan. Once you buy the radio, you're free to talk. With a home "base" radio, an agreed on channel and time, it was

possible for my mother to check in with my dad on his "mobile" unit during his lunch break or after he left his first job. CB radios were also great for funny discussions with our cousins and grandparents during our little trail convoys on trips up North. Everyone on CB radio should have a handle. My dad was the "Creek Jumper" because he attempted to jump a creek on a hunting trip and failed to make the other bank. My uncle was the "Michigan Bulldozer". My handle, given to me by my mother, was "Pebble Pup" because I was a young rock hound with a huge collection.

My dad and I liked to fish. Our favorite fishing was catching Northern Pike in the lakes at Rifle River State Recreation Area near Lupton. They really put up a fight. I used to say that I enjoyed catching a fish that required a steel leader because of their sharp teeth, like mini freshwater barracuda. But like hunting, it didn't matter if we caught fish because we just loved being out on the lakes and looking around. The water of Grebe Lake was so clear that we could see pike swimming maybe 20 feet down amongst the tall weeds that rose up like kelp and tangled our lures many times. The best lures for pike were yellow or gold Mepps spinners. We let most of the pike go but they were a thrill to catch.

In the spring, when the creeks clear after snow melt or between rain storms, my dad took me spear fishing. We usually went to the lower end of Mill Creek near the confluence with Black River in the Port Huron State Game Area. My father had two old acetylene lanterns that illuminated the creek bed almost like daylight. I was amazed at how close we could walk up to suckers, carp, and other fish. We speared a lot of fish, more than we could eat. I enjoyed spear fishing so much that I went out with one of my cousins a few times in junior high school. But after a while, it seemed too cruel and easy to walk up and impale those poor fish, so I stopped. Similar to a brief phase I went through when I shot anything that moved with my BB gun, thankfully I soon out-grew the rather sick thrill. It would be entirely different if I had to hunt and fish to feed myself and others.

The other big spring fishing activity in the Blue Water Area, at least back in the 1970's and 80's, was dipping for smelt in the Saint Clair River. This was another night time fishing adventure that required very long-handled nets and buckets. It was common back then to see a few cars driving around with a big smelt net or two on top of their car. It was amazing that we could just stick a net down, walk along the river, and haul up a bunch of fish. Then came the cleaning. It was quite a chore that took up possibly the rest of the night. Scissors made the work a lot quicker but the aesthetic just never felt right to me. It ought to be a sharp fisherman's blade I thought. Smelt fishing back then was a big deal, like when Port Huron was regularly plastered with mayflies,

but both have significantly declined since the late 1980's.

The Scout

My father never joined the Boy Scouts as a kid but it seemed like he must have. He knew all about the outdoors, camping, and backwoods skills. Just my father's camping and hunting gear, all ready for the next outing, inspired me. I remember looking at his dark green sleeping bag and being impressed that he needed only that to sleep in the wilds, rain, snow, or star shine. This became my ideal, eventually to be able to walk into the woods or fields in any season with nothing and not only survive but thrive. All of his equipment - knapsack, compass, jack knife, match case, canteen, lantern, guns, shells, bow, arrows ... all held a mystique of adventure and self-reliance.



Dad in our pup tent on a family campout.

My dad gave me a little book of his when I was a kid. It was "Straight Arrow's 72 Injun-Uities. Complete Series 1 And 2, Secrets Of Indian Lore And Know-How", published by Nabisco in 1951. Pages of what would become the book were originally distributed as cardboard inserts in packages of Shredded Wheat. The book is full of instructions on camping, hunting, and all kinds of outdoor skills, almost like a mini Scout Handbook. Despite being produced by the National Biscuit Company as a way to increase sales, it contains a lot of

useful information. My only problem with it was that the suggested projects were a little too elaborate for just camping and more like what might be constructed for a long-term settlement. Based on the drawings, a substantial forest of a lot of very straight trees would need to be cleared. Now I realize also that most native or indigenous people would likely take issue with "Injun-Uities". But, it was a product of it's time and there were worse things to be interested in. I guess my dad became a sort of "Straight Arrow" to me because of this book and his ability to make so many things. Maybe this was his scout handbook when he explored the big woods north of Lapeer Road across from his home when he was a kid.

I was too young to know much about it, but in the late 1960's, my father helped Scoutmaster Orv Collins (not related but I know him) at the Port Huron First Church of the Nazarene where we were members. My dad told me that he mostly taught the scouts how to tie knots. He enjoyed the wood craft aspect of Scouting.

I participated in the Scout program from Cub Scouts to Webelos to Boy Scouts, and later became an adult leader. I liked the meetings and crafts in Cub Scouts but I really couldn't wait to go camping with a troop in tents, build campfires, and do all of the outdoor stuff. About as close to that as I got in Cub Scouts was to carve a pine block with my dad's jack knife into a "Pinewood Derby" car. My first was a dud. My second and third cars were styled after the Consumers Power "Blue Flame" jet car that I saw in one of my dad's magazines. The Blue Flame set a new world land speed record in 1970 of over 630 miles per hour. Surely this design would help my Pinewood Derby cars. My second car had a tail fin on the back and was all blue like the "Blue Flame". My third car also had a tail fin but with a horizontal stabilizer wing on top. My dad made sure the wheels and nail axles were machine-polished, at Consumers Power of course, and lubricated with graphite. At least one of my fin cars got me the top trophy.

It must have been while I was whittling away on one of these cars with my new jack knife beside the fire with my dad, a notion grew in me of an outdoorsman taking inventory of all their gear on a rug next to the fire in the dead of winter to repair and resupply for the next excursion, like an indigenous tribesman in his wigwam or the longhouse. I liked building the Pinewood Derby cars but I really couldn't wait to go camping. Finally, in Webelos, my dad went up to Silver Trails Scout Reservation with me for a winter campout and it was great.

When I joined Boy Scout Troop 169 in Fort Gratiot in 1974, my dad began

giving a lot of his time and effort to the troop. He especially enjoyed our fall canoe trips on the Pine River near Cadillac. My dad helped me build a few Klondike derby sleds, made of cut and lashed saplings. We worked for hours and hours by the woodstove in his work shop on those winter nights. He taught me to use his draw knife to shape the wooden skis and how to cut notches to better connect the branches. For a few summers, he hauled the bulk of my nature collection to and from the Nature Lodge at Silver Trails Scout Reservation where I taught nature at summer camp from 1978 through the mid 80's, first with future TLC board member Chris Walker and later with future TLC board member Dan Rhein. I had boxes upon boxes of rocks, insects, leaves, pieces of wood, bird nests, books, and literature from all kinds of environmental agencies and organizations. Thankfully for everyone, I gradually realized that it was more important to get out into nature on the camp rather than look at collections inside a cabin.

Our leaders in Troop 169 are deserving of as much praise as my father. We could not have asked for better than Reginald Nuss, Orville Swick, Paul Gordon, Doug Gordon, Ralph "Gramps" Wakeham, Gene Bishop, Dick Morden, Larry Nuss, and others I should mention. Jerry Nuss and Orv Swick were the perfect pair to lead our backwoods troop with a mix of scout program and organized mayhem. Jerry was our drill sergeant, Orv our counselor, and both were our co-conspirators in fun and adventure. My father was quiet and had much more in common with Orville who worked for the C&O Railroad, but Jerry's robust personality grew on him. My dad highly respected Jerry, Orv, and our other leaders.

My dad picked-up on the many camp gadgets of Troop 169 that came to us through Jerry and Orv. Baking in dutch ovens was standard for scouts, but we perfected it to an art with beer bread and beer peach cobbler. We also had a big, heavy cast iron griddle, about 3-foot square and a few inches thick, that we set over the fire to fry eggs and sausage, beer pancakes, beer french toast, grilled cheese and ham sandwiches, and hamburgers to name a few. On really cold mornings, there was almost competition to clean the griddle after breakfast because it stayed warm for so long. We had an odd gadget on many campouts that I'm not sure any other troop had. This was an Orville invention that gave us continuous hot water thanks to a coil of steel pipe in the campfire that hooked to an old milk can with rubber hoses. Just turn the valve on the can and steaming hot water came out. Very handy on cold campouts. I can still hear the hot water and steam popping away into the can. Orv even had us experimenting with solar cookers that used reflective sheet metal. All of these things were a delight to my dad and he replicated everything for our family campouts.

My father bought a big aluminum canoe, large enough to haul our whole family; my parents, me, and my sister and brother. One of my father's magazines, possibly "Alaska" or "Outdoor Life" featured an indigenous design for canoe paddles and trim on the canoe. So, my dad painted the paddles. The design looks like the work of the Tlingit of southeast Alaska and the Pacific Northwest who are well known for their elaborate totem poles. Anyway, the paddles usually got a lot of looks and comments from fellow canoeists and I'm sure they helped steady and guide our ship.



My dog Cito in our big family canoe, showing a painted canoe paddle.

In later years, my father used his machinist skills to help Silver Trails Scout Reservation as he was enlisted by his Consumers Power boss, Sy Langolf. He made three steel flag poles that might still be in the parade field, each pole topped with a stainless steel fleur-de-lis hand-fashioned by my father. The steel was of course, courtesy of Consumers Power, by then Consumers Energy or CMS. My dad also made miscellaneous parts for the camp kitchen and plumbing system. Although his favorite way of helping was with his machinist skills, in 1990 he helped my brother, Dan, and I clear and mark a trail for a cross-country ski event at the camp.

Out In The Country

In 1967, my father and grandfathers started building our new house in Fort Gratiot and in 1968 we moved from our house in Port Huron Township just

over 2 miles due north to our new home on the other side of Black River. My parents' move to the edge of the country probably changed the direction of my life. We were on the north edge of development in Saint Clair County, surrounded by large swaths of forest. The mature oak forest and extensive swamp of Fort Gratiot was a big change for us. I couldn't get enough of exploring the woods and swamp waters, spending hours with my friend and future TLC board member, Scott Ferguson, and his brother Mark, catching frogs, salamanders, snakes, crayfish, snails, ferry shrimp, caddisfly larvae, dragonfly larvae, and all kinds of things in what would become the TLC's Dead End Woods Sanctuary 40 years later. I was fascinated even by protozoans once I had a microscope to see them. Unfortunately, now it seems very few of those wetland creatures remain because the swamp has been so degraded by filling and drainage.



Me (Billy) playing in the woods next to our new Fort Gratiot home in 1968.

The Dead End Woods and a woods to the east of my parents' house was where I first became aware of the amazing diversity of native forest plants like Mayapple, White Trillium, Red Trillium, Jack-in-the-pulpit, Yellow Trout-lily,

Marsh-marigold, and many other mysterious species. We knew only our names for most of them until years later. Still on the edge of our front yard for the first few years were Bracken Fern, Wintergreen, and some old silvery gray pine stumps, partially burned, that someone said were left over from the lumberjacks. It was all of these mysterious things that got me wondering about where the plants came from, how they got there, and what did it all mean. I wondered about the spots on the leaves of the "camouflage plants" (trout-lily), the fantastic smell of the flowers on "umbrella plants" (mayapple), and the strange segments of scouring rush, which we called "bamboo". My dad mowed a trail through the adjoining woods for us, which we called the "Fox Run". I gradually expanded my "boundaries" either by petition or direct action, so that by the age of 11 or 12, I could go as far as I could walk or ride a bike. I almost always returned home with something. In the spring, we picked bouquets of White and Red Trillium, Mayapple, Wild Geranium, and Yellow Trout-lily for my mother which were put on display in jars of water. We didn't know any better about picking back then. Hopefully I'm making up for it now.

State Road in Fort Gratiot was still gravel until about 1974 and there was hardly any traffic. On summer weekend evenings, my father led us on family bike rides, usually up to Krafft Road, over 1 mile west to Campbell Road, sometimes over 2 miles to North Road where we used to fly our kites in the fields, then south 1 mile to North River Road and back to State Road and Wilson Drive. You'd be seriously risking your life doing that now, especially on State and Krafft.

Apparently my father felt so much in the country that he tuned the amazing intercom radio system he installed in the house to WDEE, "The Big D" country music station from Detroit. Because of that, I still have an affinity for country music of that era. My favorite is Tom T. Hall, the "Storyteller", who just passed away in 2021.

Fort Gratiot has an often neglected thing going for it, that being Lake Huron. It's possible to pass through and not see it except a few spots along M-25. My grandma and grandpa Allen lived on Keewahdin Road not far from the lake so we often walked down to the beach. If not for my grandparents, we might have gotten to the beach only a few times. But my father had what now seems like a very clever beach access plan. He started doing yard work and maintenance for two cottage owners on Lake Huron, the Schneider's and the Nagel's. This work might have been passed on to my dad from my grandpa Allen. Every spring and fall we'd pick up tree branches, rake and mow the lawns, clean up the flower beds, and yes, sweep the tennis court. My mother took charge of cleaning the cottages and uncovering or covering the furniture.

My sister and I helped both outside and inside, and when we were relieved of our duties, we explored the beach. We often had a family swim and picnic. Mrs. Schneider was always happy to see us in the summer, so we went swimming during those visits and she gave us interesting seltzer water drinks flavored with European fruit syrup and little German fruit cookies. My dad was so smart.

I often reflect back on what a unique time we grew up in, when there was far more country, less people, more solitude, and the economy had a very stable manufacturing base that afforded more people the luxury of a real country life. The 1960's and 70's had many problems for sure, but I don't know that we can ever regain that brief time when the world felt larger and safer. I'm working now to make sure a few areas remain where people can still have that feeling.

The Family Excursion Leader



Dad packing Dan at Tahquamenon Falls State Park

Rifle River State Recreation Area was our family's favorite vacation destination because it offers such a variety of things to enjoy - the large clear lakes, streams, hundreds of acres of forest, bogs, miles of trails, large secluded campgrounds, and lots of solitude. We returned year after year, our favorite time being autumn. One year we noticed a "Lost Lake" on a map of the recreation area and we set out to find it. Our whole family, parents, kids, grandparents, uncle and aunt, bushwhacked about a half-mile through conifer

and shrub swamp. My dad and I led the way. After what seemed like a few hours, we found Lost Lake. I didn't know then that Lost Lake and 80 acres around it was a Michigan Nature Association preserve.



Pam, Dad, me, and Dan at newly found Lost Lake in the Rifle River State Recreation Area.

Our other favorite camping destinations in Michigan were Port Crescent State Park at the tip of the thumb, Burt Lake State Park near the tip of the mitt, and the UP as a whole. Our family went on vacations out-of-state only a few times. In 1970, we joined my grandma and grandpa Allen for a trip down to Florida. That was my first time in the South, and probably out of Michigan, but even at just age 7, I was absolutely fascinated by semi-tropical Florida and the ocean. In 1973, my dad took us on a big trip all through the Appalachians, from Pennsylvania through Tennessee to the Carolina's and back up. We toured

Mammoth Cave National Park, Gettysburg, the Blue Ridge Mountains, Chattanooga, Gatlinburg, Monticello, Washington DC, the Smithsonian museums, and lots of other attractions.



Dad holding the Union line at Gettysburg.

We made a trip around Lake Superior in 1974, exploring the UP shoreline from Sault Sainte Marie to the Porcupine Mountains, through Duluth where we collected agates and taconite pellets, to Thunder Bay where we collected amethyst, on to White River, birthplace of Winnie-the-Pooh and where a friend of our family owned a campground, through Wawa with the big statue of a Canada Goose, to the Ranwick Uranium Mine near Whitefish Bay, and back down into Michigan through Sault Sainte Marie where we took a ride on the Algoma Central Railway and toured the Soo Locks.

My dad often talked about wanting to visit Alaska in the early days, but he never made it. The next best thing was that for years, he subscribed to "Alaska" magazine, and in later years, he watched all of the Alaska shows on cable TV.

It's good to get away and experience new territories and big attractions as we did on a few occasions. But my father's emphasis on taking our family to our favorite Michigan destinations, relatively close to home, seemed to foster an appreciation of what we have locally. It was as though my father was telling us

not to forget about home.

The Woodsman

My great grandpa Jackson worked as a lumberjack across the Great Lakes region in the late 1800's and early 1900's. My father and I visited with him and my great grandmother many times and we heard his stories about working in the woods. My father seemed to have taken up where my great grandfather left off, becoming a modern woodsman. From our earliest days in the woods of Fort Gratiot, my father cut, split, and stacked firewood to heat the house and work shop. He inherited two antique wood stoves from my great grandpa Jackson. I chopped a lot of wood as a kid. My father taught me the different types of trees and how best to split each. After our family made our big trip through the South in 1973, my father was so inspired by the old split rail fences, that he made his own with splitting wedges using trees he was hired to take down at the Schneider cottage on Lake Huron. I thought he was part Abe Lincoln.

My dad eventually built his own log-splitter from scrap steel and a hydraulic cylinder that he refurbished. It took some of the pressure off of me to split wood with an axe, but I still spent a lot of time out back handing my dad pieces of wood.

Of course, being a good woodsman means caring for the forest as much or more than you take from it. An appreciation grew in us for living trees and the forest. Some of my earliest memories are of planting pine, spruce, and cedar trees around the yard with my parents. Later, my father started rescuing beech, maple, and birch trees from the woods being cleared around Consumers Power in Marysville. Our yard filled up with trees as it seemed most other neighbors were cutting theirs down. We even started exporting our Red Oak trees to our old territory south of the Black River in Port Huron Township where we originally lived. Each fall, my dad and I would haul at least a few pick-up loads full of leaves and acorns to his lot. Now there are large mature Red Oak growing there along with the big Red Pines that my father and his father planted in the mid 1950's.

Enjoy Winter

How many families go on winter picnics in Michigan? Probably not many. My dad took us out to the Port Huron State Game Area several times to go for a walk in the snow, go sledding, and cook a picnic lunch over a campfire. I don't know where he got the idea, but I was impressed. Sometimes we went into the game area at the end of Fieck Road and other times at what was the temporary end of Kingsley Road before a bridge was constructed over a large

watercourse.



Mom, me, and Pam on one of our winter picnics in the Port Huron State Game Area.

He also took us down to the Black River in Fort Gratiot to go ice skating. I don't recall exactly how we got down there, but maybe we drove down to the end of Beech Road. We had a great time and it was wonderful to be able to skate a long length of the river. Sometimes we went sledding down a ravine between North Road and Lightle Road in Clyde, near the Black River. If my father had ever gotten into cross-country skiing as I did later, I'm sure he would have loved it. His message to our family was to enjoy winter as much as the other seasons. Adventure should continue all year long, no matter the season or weather. A cold wind makes that very difficult, but I'm still trying.

My father had a pair of old snowshoes made of wood and leather lacing. An

indigenous friend of his from work, Charlie, who lived on the reserve over in Sarnia, Ontario, borrowed the snowshoes. When he brought them back they had all new leather lacing that was soaked in oil to protect and keep it all tight. They looked great. My dad let me borrow them a few times to go snowshoeing out in the Dead End Woods. I loved to follow rabbit tracks to find out where they lived. I later put out some wire snare traps for the rabbits but thankfully I never caught anything because those are cruel.

One night we were working on some project in the work shop and stepped outside for a while. It was the middle of winter and very cold, but the work shop was warm from the heat of the wood stove. This caused the snow to partially melt off the roof and form large icicles hanging off the lower edge of an addition about head high. The combination of melting water and very cold air caused the water running down the icicles to freeze rapidly before the water dripped off, so that they were long. The cold air also made the icicles dense. I got the idea of using an icicle to tap all of the others and play them like a xylophone. My dad joined in playing, something he probably wouldn't admit in later years, but he was still in his 30's then and foolish. Simple memories like that are treasured for a lifetime.

The Trespasser

Once in a while my dad just wanted to see what was on the other side of the fence, or across the woods, for curiosity's sake. So, we would cross a fence or a creek, ignore the signs, and have a look. It was exciting. My dad was a covert operation leader. We never got caught, confronted, or shot at. The first time I remember was going with my father and grandpa Allen to look at Bennet's Pond being dug in the woods just north of us near State and Krafft Roads. Later, my dad and I walked through the Black River Ranch a few times up in the Pigeon River Country State Forest either to take a short-cut or just to see the land.

Most people consider trespassing to be a bad thing. Granted, I wouldn't want people sneaking around on my land. But from the perspective of the trespasser with no ill intentions, it doesn't seem so bad. In fact, I like to think of it as a natural right to inhabit and wander the whole earth upon which we were born; a sort of "this land is your land, this land is my land" mentality. It has nothing to do with wanting to destroy or steal property, a thrill, or even satisfaction of evading an owner. It's more like it fits my broader sense of responsibility for the world. I must admit however, like most people, I calculate the risk and usually avoid it, content to look from a road or other public place. But right or wrong, I've mostly felt entitled to wander wherever I want, and I have my dad to thank for that in part.

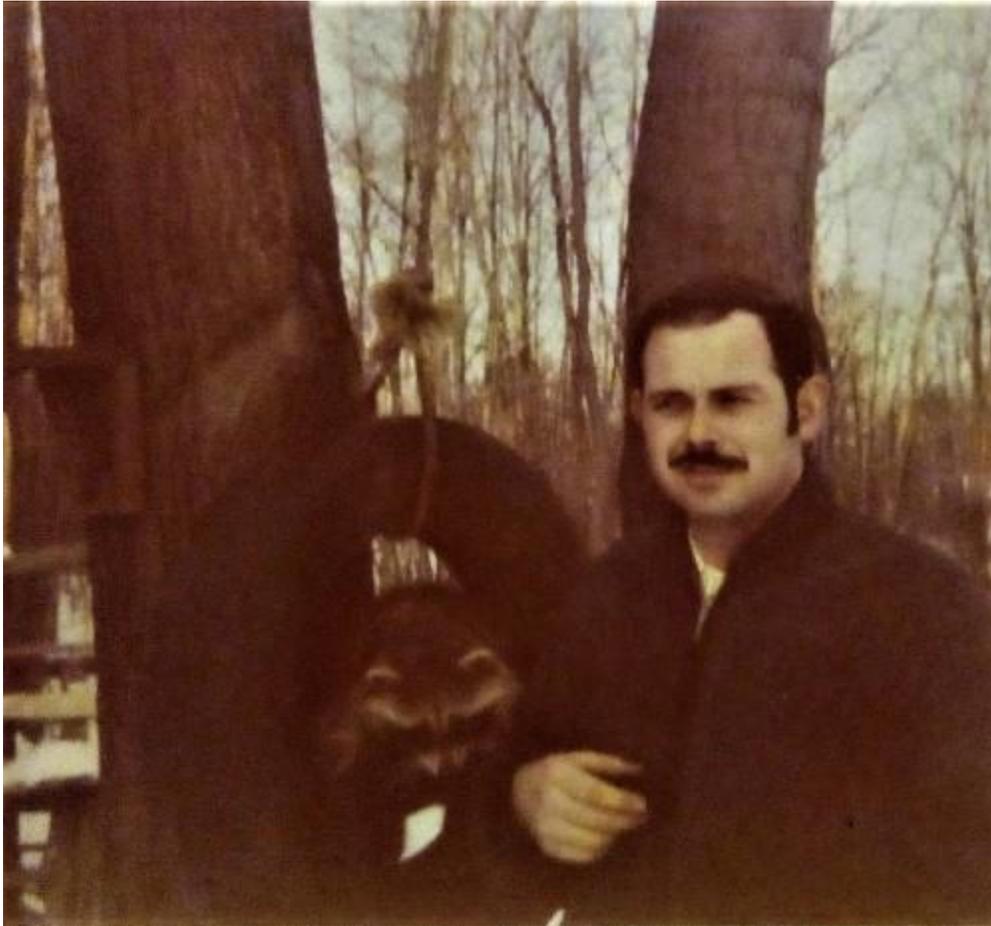
Fittingly, my work as a wetland consultant for the past 32 years has required me to be a trespasser, at least if I want to be practical about providing clients with opinions on the regulatory status of wetlands on their property. I've called myself a "professional trespasser" for years. In Michigan, the work regularly requires a consultant to determine whether a wetland continues off-site, and if so, how far, how large, and if it is connected or within 500 feet of a lake, pond, or stream. So, being reasonable about it, most of us walk onto adjoining properties and have a look, much as surveyors have the right to access most properties to do their work. Yes, we could request permission, but who knows where the landowners might live, how long they might take to respond, if ever, and making another trip out to a work site might blow the budget. On the chance they say "no", well, better to just go, look, and apologize later if necessary. Even when I have permission, I still feel like a bit of a trespasser. I consider myself privileged in a way to have accessed so many places over the years, if only for a little while, and get paid for it. Some landowners pay big loans and lots of property taxes, while I enjoy the places for free.

A few other times my dad was someplace he shouldn't have been stick in my memory. On our big trip through the South in 1973, we toured one of the Tennessee Valley Authority hydroelectric dams. While everyone was taking in the view, my dad decided to cross a fence at one side of the dam and pick wild leeks growing on the slope that we ate with supper that evening. On the same trip, my dad accidentally drove our station wagon down a wide sidewalk in Washington DC. We got all kinds of looks and we never let him forget about that one. But driving sidewalks wasn't so unusual considering that he drove many a trail on our vacations up North with the family car. As usual, he drove until he could go no further, and then we'd experience the same trail in reverse, sometimes for a few miles. I seem to have inherited this trait. In the early 90's our family made a trip to the UP in February. If you haven't seen the Tahquamenon Falls in winter, you should make a point of doing that. One sunny day on that trip, my dad was driving back roads with all of us in the family car and we ended up on a narrow snow-packed trail to the point that we encountered snowmobilers giving us strange looks. With the temperature gradually rising, we suddenly felt a tire drop through the packed snow trail and then it was a mad rush to back the car up what seemed a few miles to the nearest road.

Wild Animal Sanctuary

Our family always took care of wild animals when the need arose. My sister, Pam, and I helped nurse baby bunnies, baby raccoons, and lots of baby birds. Every few years, someone cut a tree or cleared a brush pile resulting in

orphaned babies. We even kept a raccoon as a pet for a few years. Her name was "Bandit" of course. She was a baby orphan that my dad got from a friend. We fed her with a milk bottle until she was old enough to eat her food mixed with water or milk. My dad built her a little raccoon house where she slept like a dog. She eventually took over our tire swing on the big double oak tree next to her house. She liked to sleep down inside the tire. We had a lot of fun with Bandit, swinging her in her tire swing and playing hide-and-seek. After a few years, she got a little ornery and my dad decided it was time to let her go out in the Port Huron State Game Area. I hope she didn't get hunted.



Dad with Bandit, our pet raccoon, sitting in our old tire swing.

From our earliest days in Fort Gratiot, I recall the squirrel feeders my dad nailed to the big Red Oak trees in the backyard. These were like small cedar shelves with a spike nail sticking up from the center where my parents stuck an ear of corn grown in one of our gardens. One of these is visible in the previous photograph on the tree to the left. I never saw these type of feeders anywhere else and wonder where they got the idea. Surprisingly, the squirrel feeders are still mounted to the trees with the original nails and look the same

as they did over 50 years ago.

My dad built a large bird feeder of cedar that mounted on a steel pole he made from scrap either from Anker Holth or Consumers Power. The feeder still stands not far from the kitchen window. My mom kept it loaded with bird seed, enough to appease the squirrels and enough left over for the birds. She kept binoculars and a bird book in the kitchen so we could identify all of the birds and mark the pages of each species that we saw.

A dilapidated Purple Martin house still stands out on the edge of the garden. My dad built this large multi-chambered housing structure along with a heavy-duty collapsible steel pole from Consumers Power scrap. His hope to attract Purple Martins to eat mosquitoes never materialized because of the surrounding woods. Instead, the house was taken over by sparrows and squirrels. It was a learning experience at least.

With all of our wild animals, in addition to our pet dogs and cats, it's no wonder I had a "Gentle Ben" lunchbox in elementary school. If you didn't watch TV in the 60's you'll have to look it up. Between Gentle Ben, Daktari, Flipper, Grizzly Adams, and other shows of that era, maybe our family was part of my dad's secret plan to be a ranger or mountain man saving wild animals.

Foraging Before It Was Popular Again

One of my earliest foraging memories is picking wild blueberries in the woods near our camp site at Houghton Lake State Park when I was about 6 years old. I found a few of these interesting blue berries, put them in my prized empty binocular case strapped around my neck, and took them back to my mother. Once verified, my father decided we should all go out to collect enough to make a blueberry pie.

Many times we were driving down a back road and my father stopped his truck and asked me to go over to a patch of wildflowers and pick a bouquet for my mother. I picked flowers in the woods around our house but I never would have thought to do it along a road. If wildflowers were any measure, my mother was a very blessed woman.

My dad got into gathering Shagbark Hickory nuts one fall, so we ended up collecting a lot. I think we also gathered Black Walnuts. This might have been inspired by one of his Foxfire books. Then came the cracking, which is far more work than collecting. It makes you seriously question whether it's worth the effort, but I recall we had enough nut fragments to last a few years.

Nothing Should Be Junk

It's said that the generation of the Great Depression through World War II tends to not throw anything away. I think it's actually been most generations until recently. It pained my father to see good resources discarded, as it does me. Add to that my dad's pack rat tendencies and there would be almost no need for garbage pick-up or landfills. There really should be no refuse if we want to live in a sustainable world. Fortunately, my father was very skilled at reusing materials so he did occasionally make a small dent in his collections of scrap and junk. He repaired exhaust systems, made body parts for vehicles, flag poles, bird feeders, bird houses, a toilet paper holder, parts for wood stoves, cooking implements, a log splitter, and even restored a steam engine with things that were tossed. My dad worked for a few months at least with Sy Langolf, his boss from Consumers Power, to restore an old steam engine at the Saint Clair County Farm Museum. I painted the museum name on the side of the engine. My dad and Sy said that the thing was in terrible shape when they started and they had to rebuild a lot of it. I think Consumers Power donated a substantial amount of "government" time to this project also.



Bob Collins, left, and Sye Langolf watch as David Jason Zisler toots the whistle on the St. Clair County Farm Museum's

Times Herald — Ralph W. Polovich
antique steam engine. David, 7, is the son of David and Sharon Zisler, 11875 Yale Road.



Times Herald — Ralph W. Polovich

Bob Collins, Port Huron, sits astride 'Old Betsy,' the St. Clair County Farm Museum's antique steam engine. The engine recently underwent a three-year restoration, and now glistens under a new coat of red paint. Many people donated time and contributed the \$10,000 needed to repair the engine.

As my father built our house in Fort Gratiot, he accumulated a pile of scrap wood out in the wild end of our backyard. I started building forts and became almost obsessed with using every bit of that wood and all the old nails. My friends and I built some impressive structures, one of which was a narrow 3-tiered thing that nearly tipped over with several boys in it. We tore it apart almost immediately and started over. We were never satisfied, always making additions, then tearing everything down and starting over. One of the longer lasting structures even had paneling and I was contemplating plumbing. This continuous building occupied so much of my time that my parents used to say that I would grow up to be a builder. All of the wood was eventually burned but it kept a neighborhood of boys entertained for several years.

My dad insisted that we save wrapping paper from Christmas and birthdays.

One spring I helped him make two box kites and a regular kite using the wrapping paper. The box kites were particularly impressive. He even custom cut the wooden pieces to build the kites. They seemed huge and they flew great. He got the wind to take those box kites so far up, and they stayed aloft so easily, that we could just tie them off and they stayed up. He kept adding string until the kites were almost too small to see. All of that from just some scrap paper, scrap wood, and kite string.

One day my dad and I picked through a pile of discarded materials behind the old Kmart on 24th Avenue north of Krafft Road in Fort Gratiot. It must have been the 1970's because I remember scraps of orange shag carpeting. My dad thought some large broken pieces of about quarter-inch hard, white plastic from a sign might be useful. I don't know if he had plans, but a few years later, I had to construct some kind of geometric design for my 10th grade trigonometry class. I designed a 4-cornered pyramid with a horizontal circle inside of it. All of the spaces of this structure were to be laced strings, partly to show chords within a circle. As a machinist, this got my dad's interest. He remembered the broken sign pieces and proceeded to cut them into the shapes I needed. He even polished them. I think we both drilled the holes to lace the string. It turned out great and I was thereafter reminded of the value of trash as it hung in my bedroom.

We used to say that my dad could build even a car from scrap, and I know he could have given enough time. He wouldn't have needed an old engine block but could have forged and machined his own. He made so many things it's hard to remember everything. I've listed a few already. As a machinist, of course his favorite material was metal. He made parts for our wood stoves, a pot hanger and implements for the fireplace, a firewood rack, our famous CP branding irons ("CP" for "Consumers Power" or "Collins Property"), a wood stove heat shield from the enameled sheet metal of an old washing machine, a log splitter, lots of parts for vehicles, and a clock using pressure gauge from Consumers Power which he gave to my father-in-law.

In the early 1970's, my dad got into collecting antiques, in part because he inherited a lot of old things when my great grandparents passed away, and also because his friend, Phil, from work collected. He lived in an old house on Military Street in downtown Port Huron with the stone "castle tower". We went up to the top of the tower when we visited. My dad's style of antiques were not highly valuable items, but mostly family heirlooms and things that other people would have probably thrown away. Somewhere he got an old torn print of fruit in a bowl that he put in a frame that he restored. He refinished the wooden exterior of an old clock and had the works repaired. He collected old glass

lanterns, crocks, and old photographs. He gave me an old sauerkraut masher made from a small section of a log with a bamboo handle. He told me to hang onto it because I might need it someday, and I have. His interest got me going, so I collected up old things, in part to make him happy. I knew where there were old bottles out in the woods, old canning jars and lids, and all kinds of junk that I brought home. I even found a few of the old green glass electric line insulators which were one of our favorites.

Collecting junk runs in my blood because I've done it from the age of 5 or younger. I collected just about everything natural but even on trips into town with my mother, I picked up stuff from parking lots and streets. There wasn't much rhyme or reason, but it was whatever caught my interest. I especially liked lead wheel weights and I did everyone a favor by picking those up. I gathered odd pieces of metal or plastic, rubber gaskets, springs, parts of wiper blades, bolts, and all kinds of junk. I had a dresser drawer full of this stuff that I treasured as much as my collection of shell casings from hunting trips with my father. If I wanted to make something, I might take a look in the drawer. But, just so you don't think it was all paradise, one day my father insisted that I throw out my drawer full of junk. I don't know why, but it was a very bad day. I'm pretty sure I kept a few things.

When I was a little older, my school, Thomas Edison Elementary, was being enlarged and remodeled. The workers made a big pile of junk at one end of the parking lot. This was like a gold mine for me. For most of the school year as I recall, I took home all kinds of metal scraps and pieces of copper wire to add to my dad's collection. He liked my copper at least.

My Math and Science Tutor

When I was having a rough time in math, which was frequently, my father was my math tutor. Fractions were a mystery to me, and later I had trouble with algebra. My dad used fractions on a daily basis at work, sizing parts and drill bits. He was always converting fractions to decimals or vice versa, and had most of the decimal equivalents memorized. Many a night we sat at our old 1950's style kitchen table with the fake white marble laminate surface, mod shiny aluminum trim, and chromed arching legs that made it look like a diner or ice cream parlour table. Some of the patterns, nicks, and scratches on the table top were etched in my head after sitting there so long trying to grasp mathematical concepts. My dad wasn't always so patient with me in these teaching sessions when I wasn't understanding, but he had a lot of patience and I am thankful that he took so much time to help me. I actually enjoy mathematical ideas when I can dig into them at my own pace. I eventually made it through calculus, so my dad gets some credit for that.

The kitchen table was where I did most of my studying in the early days. My dad was there to help me through science classes also. It was mostly electronics that got his interest. We had a lot of discussions and arguments about electronics and our conflicting understanding of electron flow and circuitry. I was in what felt like an elite group at Port Huron Northern High School that took electronics classes for 3 years (1979-81) taught by Paul Johnson. We didn't need to take the classes, but we did it because of our interest. The third year was largely a repeat of the second year, and as I recall, both were 3-hour classes. Mr. Johnson was a great a teacher, frequently entertaining, like tossing a well-chalked eraser at a dozing student's head, but otherwise relentless in hitting all of us with a wide range of complex concepts. At that time, the digital age was just kicking in, so we got into superconductors and microchips a little but we were still mostly learning about transistors and even cathode ray tubes.

Some of my earliest experience with electricity was with my dad. I was always taking things apart, like old lights, clocks, and radios, and I knew what the shock of a household AC electric current felt like from a fairly early age, which might explain some of my problems. My father and I made a crystal radio from a Tandy RadioShack kit, which I kept up in my tree house. Later, I made a crystal radio using a galena crystal from my rock collection. My dad bought me a complete electronics kit with little springs that held wires and components so that everything could be easily changed to make a wide variety of circuits on a work space about half the size of a checker board. This was kind of like the Erector Set of electronics. Tandy kits were popular in the 1970's, almost as popular as model rockets. My dad built his own metal detector from a Tandy kit, the same one we took on our deer hunting and vacation treks.

About the same time, my father and I built an electric motor for a science fair at Fort Gratiot Junior High School. The motor was made from a wood board, pencil, thread spool, magnets, aluminum foil, little scraps of copper, and some old copper wire. My dad resisted the urge to take over my project, and I didn't just hand it to him. I remember winding all of the wire on the armature, cutting and gluing the foil on the shaft, making the brushes, and soldering wires. I gained a full understanding of how an electric motor worked and could still build one from scratch. Fascination with electronics is something my father and I shared. Had I not been more compelled by my interest in nature, I might have gone to Michigan Technological University in the UP to study electrical engineering.

Little Things

From my experience as a kid, the little things that parents do with their kids can have as much or more of an impact than the big things. A very early memory is my mom and I playing with Silver Maple seed "helicopters" (samaras) behind my grandma and grandpa Collins' house. We caught the seeds as they rotated down, or picked them back off the ground, and threw them in the air to watch them spin again. If I sat here and thought long enough I'm sure I could remember so many little things that my parents shared with me. Another memory that has stuck with me is how my dad would pick a hollyhock flower from my grandparents flower bed and remove part of the flower to show me how it looked like a small woman in a dress. Seems like this was something his grandmother showed him. An amazing thing he showed me at my grandparents' house was how to turn the water hose on just enough for a trickle, and then light the methane coming out so that the hose end had both water and a flame coming out. Apparently, this is particular to Port Huron Township but is possible anywhere ground water extends down to a limestone bedrock layer.

Just doing something different can leave an impression. During one particularly hot summer vacation at Rifle River State Recreation Area, everyone was trying to cool off in Grousehaven Lake. But it's not deep and cool like Lake Huron, so it wasn't very refreshing. My dad got the idea to go way back in a nearby cedar swamp where there was a cool shaded trout stream. He sat down next to the bank and soaked in the stream for a few hours. Word got out of his discovery and I joined him on his next stream bathing. I wondered why we hadn't thought of it earlier. The lake just no longer cut it for a refreshing dip.

Little things like bugs left a lasting impression on me as a kid and my dad was part of this too. I collected insects like there was no end to them from 7 or 8 years of age until I was about 12 or 13, filling up old dresser drawers in the garage with my poor victims. But I collected off the grills of vehicles as much as I netted or otherwise caught live bugs. My dad sometimes helped me add to my collection, until it got so large that he likely regretted it. He helped me catch my first cicada up at Port Crescent State Park. He would bring me a bug once in a while, usually from work. His favorite was to bring home live praying mantis's from Consumers Power to help catch pests in the garden. We always kept one or two as pets for a while so we could watch them. I had a plastic thing called a "Bug Keeper" designed especially to keep and feed bugs. We fed flies to the praying mantis's and they would even eat bologna on a string. Looking into their eyes and watching them turn their heads is like observing an alien entity. Like many kids, we collected a few monarch caterpillars to

watch them build a cocoon and hatch into a butterfly. We kept lots of fireflies, and once in a while, a walking stick. And we had an ant farm. I still rescue ants, sow bugs, centipedes, slugs, and all kinds of things from the firewood. I try to be kind but they don't make it easy. I have also been very kind to several generations of Northern Hornets that have nested in our old cars and around the house. If they are still around in late fall, I put them in a container in an old car so they have a better chance of surviving the winter. I don't understand all of the people paying big money to spray nasty chemicals to get rid of them while I'm saving them. I am convinced that there is generational memory in hornets because, with few exceptions, I can open one of the old car doors on a hot summer day with a nest of about 20 plus hornets a few feet from my face while I talk to them. I reassure them and they seem to tell each other that this guy is OK.

My dad encouraged my insect observations in ways he had not anticipated. When he built our house, he left narrow gaps between the vertical siding panels. These gaps were covered with narrow wood strips, but there were still small open spaces. The hornets and wasps just loved these gaps and would nest in them every summer. Kids in our neighborhood were always getting stung by these nasty critters. We got stung once in a while but we soon learned which gaps they nested in and where to keep distance. One year, my dad finally filled all of those gaps with caulking, coated over with a thick stain, and no more hornets and wasps. I kind of miss them, especially the big black ones.

My dad did most of his own vehicle work and so was always welding something, usually part of an exhaust system, or putting more leaf springs in the suspension of the truck to carry more firewood. So, I was frequently recruited to go out and hold a light or a piece of steel while he welded. I was always fascinated by the molten nodules of metal that dropped on the concrete. I also entertained myself by watching various ants, beetles, and other bugs crawling on the concrete, and moths attracted to the light.

Big Things

Of course the big things are important. My father provided our family with a very stable home, not only economically but emotionally. He worked two jobs as a machinist nearly his entire adult life, the first full-time and the second nearly so. His usual routine in the 1970's through the early 2000's was to work a full day at Consumers Power, come home for supper that my mother would leave prepared for him in the oven, leave home again about 6 or 7 PM for his second job at some small machine shop, and usually not get back home until after midnight.

I remember only a few brief conflicts between my father and mother. If there were more problems, my sister, brother, and I were not aware of them. I'm certain it wasn't easy, but I am thankful to my parents for giving us an emotionally stable home throughout our childhood. If things got too tough, my grandparents were always there for back-up and I am thankful to them also. I wish all children had the supportive home and family that we had.

My parents were supportive of our ambitions; my mother through encouragement and logistics, and my father by example and through material support. My mother took us to the YMCA in Port Huron to learn swimming and ran us around to school and scout activities. My father attended scout campouts and did all of the many other things I have mentioned. My father didn't hand things to us. My sister and I had to jointly buy his old car, a white Plymouth Satellite, in order to use it during our high school and community college years. He didn't pay for our college educations, but he gave us opportunities to earn the money. The rest, we borrowed from my grandpa Rollie. I paid him back every penny he would take. My father believed that buying anything beyond the bare essentials of food, clothes, and tools for work was luxury. As I got more interested in music, it was almost a crime that I might pay \$8 for a record album, so that happened very little. But more importantly, it was because of this stable, supportive, and by no means extravagant home life, that my sister, brother, and I had the luxury of pursuing almost anything that we set ourselves to.



Pam at the Crystal Falls in Yellowstone National Park where she worked on the camp maintenance staff in 1987 with Youth For Christ.



Pam, Dan, and me in the Port Huron State Game Area in 1983. Photo by Chris Walker.

Last Years

I give my father credit for putting up with my wild ambitions in his later years. Cheryl and I bought the Bebezland Farm out here between Brown City and Marlette. My dad came up several times to wire and plumb the house, replace our well water pump, deer hunt, plow our driveway, and help plant our

gardens. He made friends with our horses and chickens and gave us some of my great grandparents' chicken equipment, like a chick feeder and a wire chicken catcher. He made us a big steel triangle ringer so we could call all of our farm hands to dinner. He made parts for our sickle bar hay mower and helped me start repairing an old hay rake. One of his last projects before his health declined was refurbishing a small ornamental windmill for the farm.

He attended several of our TLC board meetings, annual meetings, and work days at the Dead End Woods Sanctuary in Fort Gratiot. He liked to bring a bowl of macaroni and tuna salad like my mother made and his cheesecake for our lunches. My dad made a large donation to the TLC to buy our North Street Station property. He lent me a weed whacker that we used for our stewardship on Deerfield Wind Energy Preserve in Huron County.

My dad kept working almost full time as a machinist at Johnson Hydraulics in Saint Clair until he was 80. That had been his second job for many years, since the late 1980's as I recall. Health issues started catching up, otherwise, I'm sure he'd still be there working.



Dad working at Johnson Hydraulics in 2013.

In 2021, my dad started his own garden plants in his last spring, which I cared for and planted in the summer. In late summer he even canned 7 quarts of tomatoes saying it was at least 7 more than he had. With the decline of his

heart, circulation, and kidney function, and having to go to dialysis 3 days a week for about 5 hours each time, daily life was rough. Despite this, on his good days he still enjoyed cooking. My dad always liked recipes and cooking. We used to call him "Chef Robert". In his last days, if he wasn't watching a TV program about Alaska or gardening or trains, he was usually watching a cooking program. It started with Martha Stewart of whom I was a fan from the early 90's. He liked Rachael Ray. His favorite was Lidia of Lidia's Kitchen with all of her Italian dishes. Last but not least was Kardea Brown with her Deep South cuisine. In his final days, I think my dad had a feeling he wasn't going to make it much longer, so he seemed to make recipes and use cooking utensils he hadn't before. He made his last meal at home in a new Crofton enameled cast iron French oven that had just been removed from the box. The recipe was some kind of beef, potato, tomato, and cheese casserole.

My dad smoked most of his life. Marlboro was his brand. Whenever we were outside, there was sure to be smoke. As a kid, the smoke didn't bother me so much and I later came to think of it more as an outdoor ritual, not unlike the smoke in religious ceremonies. It didn't feel quite so cold when my dad lit up and I always liked the smell of that first light. The lit cigarette maybe even imbued my father with an air of strength somehow. It certainly wasn't worth the health effects, but my dad got a lot of useful stuff from Marlboro just for smoking, like the vest I'm wearing now, enameled ranch cook ware, a ranch bowl and mug set, cowboy recipe books, a thermos jug, and a cooler, among other things. He finally stopped smoking in 2020. It's not fair that for his effort he should only have one year left. For anyone that smokes, keep in mind that it may not get your lungs but it will affect your heart, kidneys, other organs, circulation, and it adds up as you get older.

My father's last days were not pleasant, but he kept trying. He really tried. I'm very thankful for the help of my cousin Larry Strieter and the steadfast encouragement of his friend Tom Dornoff, a co-worker from Consumers Power. As I hope you can see, a few months pale in comparison to the rich life my father gave our family over decades.

Other People We Have Lost

With our aging participation in the TLC, our newsletter is at risk of becoming full of obituaries. However, there are a few people who passed away in late 2021 and early 2022 that must be mentioned. We will feature more information about them in future newsletters.

Jim Hollenbeck passed away on September 30, 2021. Jim was an environmental co-worker and friend of TLC Executive Director Bill Collins, from his days in Lansing. Jim conducted a phase 1 environmental assessment for our Loznak Sanctuary in Marysville and had made arrangements for us to properly dispose of waste oil found in an old drum on our Bidwell Sanctuary.

Janet Kruger, former President of the Clyde Historical Society, passed away on November 18, 2021. Janet was a long-time friend of many of us in the TLC and she was very interested in protection of historical sites and natural areas. If not for her, the TLC would likely not have a conservation easement on the Bob Putze forest in Ruby.

Dr. Syed Latafat Husain Hamzavi passed away on January 15, 2022. He was the founder of Hamzavi Dermatology in Fort Gratiot with offices throughout the Detroit area. The TLC received our Peltier Beach ridge Sanctuary in Fort Gratiot in part to the generosity of Dr. Hamzavi who preserved it as mitigation for wetland impact for his office expansion. Dr. Hamzavi was also a friend of TLC Executive Director Bill Collins.

Spongy Moth (Gypsy Moth) Suppression

Some residents in Saint Clair County recently received notice of the planned aerial spraying of *Bacillus thuringiensis* or Btk bacterium to control Gypsy Moths, now known as Spongy Moths. This is in response to a large outbreak of Spongy Moths last year. The spraying will begin this May and extend through early June. As most people know, Spongy Moth caterpillars can severely damage or kill oak trees by consuming the leaves and completely defoliating them. Particularly hard-hit are white oak species because they contain less tannin than red oak species. Spongy Moths first hit Saint Clair County in the early 1980's and defoliated large parts of the Port Huron State Game Area. While most of our oak forests have survived, repeated outbreaks of the Spongy Moth can be devastating.

There are currently few options for controlling Spongy Moths that don't do more harm than good. Application of Btk seems to be one of the better choices. However, as with most things, there are considerations. While Btk is a naturally occurring bacterium and is said to be harmless to people and other animals, Btk also kills the caterpillars of native butterfly and moth species.

Most publications emphasize that Btk is safe for pets, wild animals, and plants, but avoid mention of other moths and butterflies. They state that Btk does not affect their adult stages without mention of the caterpillars. There are many native butterfly and moth caterpillars that depend on forest habitat in our region. They are feeding in late spring and throughout the summer and are killed by Btk. At a time when our native insects are declining due to so many factors, we really need to be careful about harming them further.

The Butterflies and Moths of North America project (butterfliesandmoths.org) currently lists 822 species of butterflies and moths recorded from Michigan. Of these, 114 are known from Saint Clair County. The caterpillars of about 45 of these species depend on forest habitat, and the caterpillars of at least 12 of these species feed specifically on oak trees, including the Smear-dagger Moth, Orange-tipped Oakworm Moth, Pink-striped Oakworm Moth, Polyphemus moth, Rosy Maple Moth, Blinded Sphinx moth, Hag Moth, Red-spotted Purple butterfly, Banded Hairstreak butterfly, Oak Hairstreak butterfly, Hickory Hairstreak butterfly, and Striped Hairstreak butterfly. Most if not all of the approximately 45 species of butterfly and moth caterpillars could be expected to be feeding in the forests during the proposed Btk spray period in Saint Clair County.

It could be argued that without oak trees we might not have these butterfly and moth species that depend on them, so better to spray the Btk. That's one perspective. Another is that if we eliminate those butterflies and moths with Btk, it won't matter. A more balanced approach may be possible. Some oak-dominated forest might be left unsprayed, partly to spare native butterfly and moth species and partly to study the effects of letting Spongy Moth outbreaks go uncontrolled. Forests dominated by red oak species, which include Red Oak, Black Oak, Pin Oak, and other oaks with pointed leaves, are more naturally resistant to Spongy Moths. Forests dominated by white oak species, which include White Oak, Bur Oak, Swamp White Oak, and other oaks with rounded leaves, are more susceptible to Spongy Moth defoliation and should be a higher priority for protection.

To some extent, spraying Btk to control Spongy Moths is attempting to treat the symptom rather than the cause of the problem. Obviously, Spongy Moths are an invasive Eurasian pest species that can be very destructive. However, good native tree diversity and strong native bird populations go a long way toward countering Spongy Moths. With a higher diversity on both species and genetic levels, the native forest tree community is more resilient. Woodland birds can consume large numbers of Spongy Moths. It is estimated that one

pair of Black-capped Chickadees may forage several thousand caterpillars to raise a single brood of young. Some bird species, like the Black-billed Cuckoo and the Yellow-billed Cuckoo, both in our region, are voracious consumers of caterpillars and follow outbreaks of pests like Spongy Moths and Eastern Tent Caterpillar through the summer.

Saint Clair County landowners have the opportunity to decide whether they will allow their property to be sprayed with Btk this year. Although the spraying notice was just mailed in late March, the opt-out deadline is April 15. You should check your mail to see if you received a notice from the County. Not every landowner did and not every property will be sprayed. An opt-out request can be mailed to: County of Saint Clair, Jennifer Posey, Administrator/Controller's Office, 200 Grand River Avenue, Suite 203, Port Huron, Michigan 48060; or e-mailed to gypsymoth@stclaircounty.org. For more information, see the Saint Clair County web site at: stclaircounty.org/caterpillars

In the mean time, you can do a few things to help control the next Spongy Moth infestation. First, look around your property for their egg masses. These are a light beige color and can look like spots of slightly fuzzy spray foam stuck to tree trunks, buildings, and other structures. They could be stuck to anything and are usually an inch or two across. There may be one mass or several all stuck in a group. Remove these masses as best you can and burn them, soak them in a solution of detergent for several days, or otherwise destroy them. You can also spray the masses with a suspension of vegetable oil in water with detergent. You can place sticky barrier bands around tree trunks to prevent the newly-hatched caterpillars from climbing the trees in summer to feed. Keep in mind though, that these sticky bands will also trap a lot of other insects that are potentially beneficial to the trees and such sticky traps are a rather cruel way to go. Some people also use collection bands of burlap or other fabric tied around tree trunks in the early summer to attract the caterpillars during the day. The collected caterpillars can be destroyed on a daily basis. If you have extra time in the summer and can clearly identify the caterpillars and moths, you can go around and crush them. There are lots of web sites to help you identify the Spongy Moth, the caterpillars, the egg masses, and with lots of suggestions. In the long-term, you can try to improve bird habitat on your property by maintaining native vegetation, planting trees, planting shrubs, creating a good source of open water, and installing nest boxes, particularly for woodland birds that feed on the Spongy Moth caterpillars.

Thank you to TLC member and friend Bob Haas for his help on this article.

Ecology News

With all the bad news in the world right now, here are some positive articles:

Why Tiny Forests Can Make A Big Difference

Planting, or letting grow, even a small patch of dense trees can help more than you might think. Of course, far more forest is being eliminated every year, but every little spot is now important.

<https://www.bbc.com/news/av/uk-england-nottinghamshire-57414105>

Indonesia's Fishers Harness Protective Power Of Mangrove Forests

Mangrove forests are amazing and should be a foundation of climate resilience for every coastal nation. Only now are people realizing what a huge mistake it has been to clear them.

<https://www.dw.com/en/indonesias-fishers-harness-protective-power-of-mangrove-forests/a-60500759>

The Caribbean Mangrove Forest That Defied Destruction

The power of a few people caring.

<https://www.bbc.com/future/article/20220329-how-a-caribbean-community-restored-its-dying-mangrove>

Biodiversity: Pressure Grows For Deal To Save Nature

Better late than never.

<https://www.bbc.com/news/science-environment-60737448>

Kansas City Man's Plea For Native Flower Justice Unites Gardeners Around The World

It's a natural right, as basic as our right to breathe air and drink water.

<https://www.kcur.org/news/2021-09-11/kansas-city-mans-plea-for-native-flower-justice-unites-gardeners-around-the-world>

TLC Membership

With your membership, the TLC is better enabled to protect important natural areas in our region. We offer three membership levels as shown below: Individual \$25, Family \$30, and Business \$100. Members will receive our e-mail news. Some of you are members based on your previous donations, volunteer efforts, or other help. You can also make donations in honor or memory of someone or something. For donations of \$100 or more, your name will be listed on our web site. For larger donations, please contact us for details. Make checks payable to "Thumb Land Conservancy". Mail checks and forms to: Thumb Land Conservancy, 4975 Maple Valley Road, Marlette, Michigan 48453. Make sure you provide us with your mailing address and e-mail address. Providing a phone number is optional but helpful.

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