Storytelling Best Practices for Outdoor Education

Includes:

Final Report

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Completed for: Camp Kawartha

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STORIES ON THE LAND

A CKEC SEASONAL FIELD GUIDE

BY: EVE LOCKHART

CREATED FOR:
ERST 4830Y 2024-25
TCRC #6259

Camp Kawartha
Inspiring Environmental Stewardship

ACKNOWLEDGEMENTS

Tackling a project of this scale and style for the first time was initially out of my comfort zone. Still, it was increasingly made easier by the amount of support I received. I want to thank Jacob Rodenburg, Craig Brant at Camp Kawartha, and Matthew Walmsley of the Trent Community Research Centre, who hosted me on this project. Thank you to Dr. Stephen Hill (supervisor) and Dr. Autumn Watkinson of The Trent School of the Environment for supporting me academically through my coursework. Leigh Symonds and Jamie Williams are CKEC educators who shared their experiences on the land with me and helped inspire this resource. Thanks for all your hard work educating the next generation of stewards! I also want to thank the Council of Outdoor Educators of Ontario (COEO) for featuring my workshop at the 2025 Make Peace with Winter conference and the workshop attendees for all the excellent knowledge they shared with me. Lastly, but most importantly, this project would not have been possible without the traditional land of Michi Saagiig Anishinaabeg. I recognize this Treaty 20 and William's Treaties land and the generations of knowledge it supports. I am grateful for the teachings and care of the First Nation communities who steward this land, and I hope this work honours your teachings.

Caring for and sharing about the land and its many inhabitants requires dedication and community. It is my greatest academic achievement to share this resource with you. I hope it will serve the Environment Centre and its many visitors for years to come. Thank you to everyone who contributed to crafting this great learning experience and field guide!

Photo: Eve Lockhart.

TABLE OF CONTENTS

INTRODUCTION

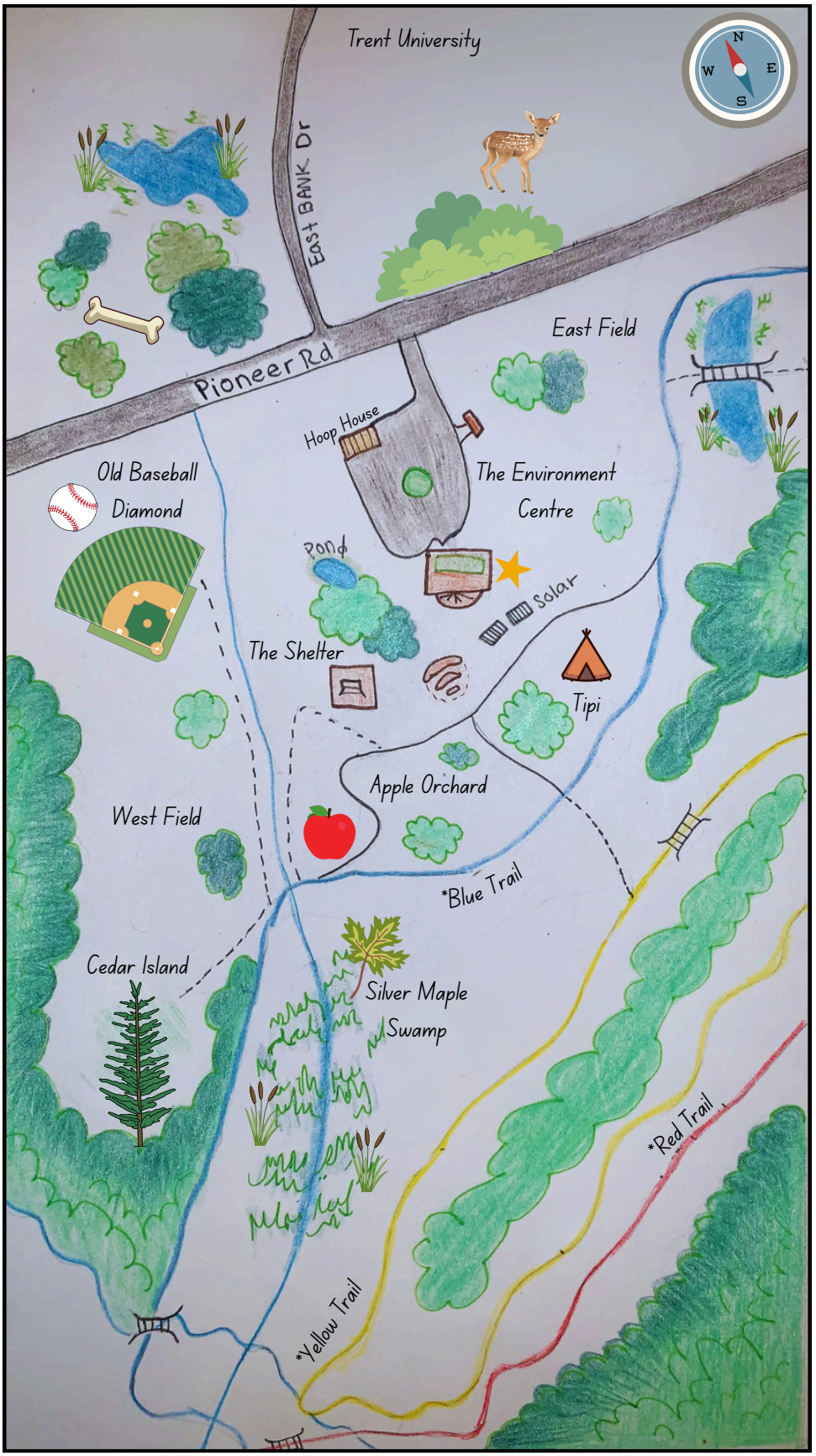
Photo: Eve Lockhart.

After many years of teaching about the land, Camp Kawartha and its Environment Centre team began to notice something missing. While they had access to nature education materials from across Ontario and Canada, they lacked something more personal: resources that speak directly to the land they walk, teach, and learn on every day. To help fill this gap, a Community-Based Research project was launched in partnership with the Trent Community Research Centre. The goal was to create a field guide rooted in local stories and knowledge that celebrates the unique biodiversity and history of the Trent Nature Areas. This guide is more than a collection of facts. It offers stories, hands-on activities, and personal reflections to help readers build a deeper connection to the natural world around them. It is meant to grow environmental literacy and inspire curiosity and care in learners of all ages.

To shape this resource, five key questions guided the research: What makes a good story? How can environmental and outdoor education work across different age groups? What tools are educators using to create meaningful learning? What species of plants and animals live here, and what stories do they tell? What information would the staff at the Centre find most useful? A mix of literature and informal conversations helped answer these questions and laid the foundation for this field guide.

In the end, this guide hopes to strengthen our understanding of local ecology while encouraging a more thoughtful and lasting relationship with the land.

MAP OF THE LAND



LEGEND-

- Water
- Structures
- Side Paths
- Wetlands
- The Boneyard
- The Birdfeeder

*For Trail information visit :
https://www.trentu.ca/natureareas/

Map was created by Eve Lockhart using multimedia, 2025.

SPRING

“The Great Melt”

The snow is no longer white and fluffy but mixed and melted into the mud. The dirt wakes up from a long night, searching for water to quench its thirst, only to see that the spring thaw has replenished the rivers, creeks and ponds. At the same time, we may dislike the wet, muddy weeks before the spring flowers make a peep.

Many creatures are excited to feel warmth back into their furs, feathers and scaly skin, where food is plentiful once more, and life returns to the forest.

Photo: Eve Lockhart.

BLACK-CAPPED CHICKADEE

Poecile atricapillus

Mésange à Tête Noire

"A Boy and the Chickadee"

On a warm spring day, just outside the Environment Centre, you can find the bird feeder filled with action. Birds of all kinds dash in and out of the feeder, bicker back and forth over who gets what seeds, and fend off their lunch from pesky squirrels. Having a special encounter here with a bird has become an Environment Centre staple, and when you are blessed to gain an animal's trust, you must respect and cherish the moment, but it's not always easy.

One day, a local school group visited the centre, and like always, the kids loved watching the creatures come and go from the feeder. One child with such love for birds wanted so badly to have a chickadee land on his land. He was given a few seeds just like his classmates, and they all stood excitedly waiting for that first bird to grab a snack. After almost all the kids used up their seeds feeding curious robins, wrens, and chickadees, one boy failed to feed anything.

While it wasn't his fault, he'd flinch from joy every time a bird got close, scaring it away. Once he realized that being still is key, he got fearless and froze like a tree. He paused, one hand firmly in the air, waiting patiently, and then... FINALLY!

Figure 1. A Chickadee makes an appearance on a person's hand without food. Photo: Eve Lockhart, 2025.

Time to Explore!

Try to find an area with lots of Chickadees, like the bird feeder at the Environment Centre or any forested area in the city. Watch them closely. Notice how they call out predators to alert each other, or how if one bird notices you, others quickly join in.

If you can access a device, you can play a Chickadee bird song and watch them respond! Pay attention to their bird calls, they are like a language that can tell you the ins and outs of movement in the forest.

BLACK-CAPPED CHICKADEE

Poecile atricapillus
Mésange à Tête Noire

"A Boy and the Chickadee"

He felt the rigid claws of a small chickadee land on his fingers, so light and delicate as it moved slowly to examine the food. One peck here, another there, and the boy held back a giggle. The bird tickled as it nibbled at the boy's hand. In that moment, he gained the bird's trust, and in their most vulnerable state, the chickadee relaxed enough to eat before calmly flying away. The boy felt proud that he could stand still and be brave, waiting for his moment.

What is fun about having a flock of chickadees find comfort in this feeder area is that you can experience them up close without food. Chickadees are naturally curious and brilliant birds. They will approach you if you stand around the area for too long or hold your hand out like you have food (Figure 1). While the birds may think you have food to offer, they may land on your hand hoping for a snack, then fly away when they realize you don't.

Even though many of these creatures around the centre are used to people, waiting for the animal to approach you is essential. Never reach out and touch a wild creature, attempt to chase it, or feed it anything other than what is instructed to ensure everyone is respected and safe.

Did You Know?

Chickadees have unique nesting habits. They can collectively shape and build a nesting space in old logs or abandoned Downy Woodpecker holes. A pair will cooperatively prepare the ideal nest for the arrival of their chicks.

These birds are social and communal creatures, even flocking with birds outside their species.

See page 5 for a map to The Birdfeeder.

TREMBLING ASPEN

Populus tremuloides

Peuplier Faux-Tremble

"A Late Spring Snow?"

While it may be late spring, unusual flecks of white silk and fuzz float through the air, blow in the breeze, and land everywhere. They look like snow from a distance, covering the ground and many surfaces with a white layer of fuzz. Sometimes, people stop and stare, thinking, "Has May been filled with despair?" It's just the aspen tricking the eye, adding biodiversity and expanding its species.

Mature Aspen stands are often biological clones, sending up shoots through their roots but occasionally breed, dispersing their seeds. These magical trees grow long droopy catkins, seed pods resembling fuzzy caterpillars. During late spring, the catkins open up, releasing white silky seeds into the air for wind dispersal. These seeds can travel far and wide, introducing new genetics into the land, allowing Aspen trees to build up local ecosystems as a primary succession species.

They thrive in poorer growing conditions, making them ideal trees to reforest areas after fires and development.

Figure 2. Aspen catkins opening up for wind seed dispersal in mid to late spring. Photo: Toronto Wildlife, 2012.

Did You Know?

The world's largest living and oldest organism is a giant Trembling Aspen grove. Pando lives in Fishlake National Forest, Utah. This group of ~50,000 trees are all genetically identical, sharing one root system and estimated to have lived for thousands of years.

Next time you see an Aspen, could you try to find others near it? They are likely connected.

MAYAPPLE

Podophyllum peltatum
Pomme de mai

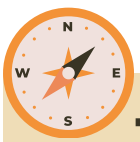
"Fairy Umbrellas"

Deep in a shaded wood, along the forest floor, groups of umbrella-like leaves cover the ground, hiding away the secrets of the creatures who shelter below. A tiny vole feels relieved when these plants begin to grow because it can hide between their canopy, protected from a pesky hawk who lingers above. A whole world lives below their leaves, from insects like ants to fungi and toads. This species is underappreciated for its role in the ecosystem.

Mayapple plants are truly unique. Each one bears one stem, two big leaves, and later a single blossom, which turns into small fruit. Each plant requires four years of maturity before it blossoms and grows a fruit, and since the bloom is short, witnessing it is considered special.

Figure 3. Two Mayapples are in bloom at a plant nursery. Photo: Eve Lockhart, 2023.

These plants indicate when a forest is healthy, growing only in the best conditions and thriving on undisturbed soils. They serve as a deep cultural connection between Indigenous peoples and the land and provide medicinal properties. The presence of the Mayapple is tied to rebirth and regeneration. Never discredit small ground covers, they are mighty and each shares a critical role in securing life on the forest floor. As more land develops and changes, species like the Mayapple grow increasingly at risk.



Time to Explore!

Have you ever seen a Mayapple before?
As a common plant in this area, they can be found in many wooded places with dry and moist soil. Take a short walk around the Environment Centre, can you find them?
While they are an early spring plant, you will still see remnants of the plant outside of their prime. They may be crispy and go orange after the summer heat. Just be careful of the fairies that live beneath them...

SUMMER

“A Break in the Humidity”

The day peaks with hot and humid air once again. A distant rumble shakes the ground as dark clouds barrel across the horizon. "It's gonna be a good one," says the weather station. A welcome break in the humidity is needed. The sky soon becomes engulfed by grey, and sweet rain tumbles down.

When the sun peeks out after the last boom, everything breathes a breath of fresh air. The staleness of a warm, dry day is replaced by a windy, cool evening. Birds sing a little louder that day, thanking the rain for replenishing the land.

Photo: Eve Lockhart.

AMERICAN ROBIN

Turdus migratorius

Merle d'Amérique

"A Robin's Perfect Spot"

Another hot day in late summer starts like they all do; the warm sun emerges over the horizon once more. While the shade of the forest offers some relief, a few species prefer the open areas where their food sources are.

A robin finds herself foraging for earthworms along the side of the driveway; each morning, she finds herself here; it has some pretty good grub. She listens for movement, tilting her head, stopping often to snatch a worm from under the dirt. A few other robins converse, singing as the sun peaks in the sky.

Once the midday heat is well underway, it gets quiet around the Environment Centre. Everyone is too hot, and things feel too quiet. The robin hops around the shade of the bushes, slowly opening her wings to cool herself off.

Once she finds the perfect spot, she drops to the ground, wings splayed as far as possible. A gentle breeze moves between her feathers, which is still not enough to cool the bird down comfortably.

A few small puddles from last night's storm are scattered around the driveway, and their evaporation only adds to the relative humidity around the Centre.

But the robin has a great idea. She flies up and splashes hard into the first puddle, its murky water finding its way through her wings, cooling them slightly.

Did You Know?

Birds, including the robin, are endotherms (warm-blooded) like mammals, and they rely on internal functions to maintain a steady body temperature. Endotherms use thermoregulation, which means that regardless of the environmental conditions, they can achieve a near-constant body temperature. However, with a warming climate and changing weather conditions, it becomes harder to regulate body temperature. Hot, humid conditions are dangerous for many animal types, even humans. Animals are intelligent, and many are adapting to these new conditions, attempting to keep the survival of their species going.

AMERICAN ROBIN

Turdus migratorius

Merle d'Amérique

Soon enough, after a few minutes of her commotion, she's joined by the rest of her blush (collective noun for a group of robins).

After playtime in the puddles, the water no longer cools the birds down, and they move on to shade. Where they spread their wings once again, letting a breeze dry what little moisture is leftover.

The robin grows hungry from her fun afternoon; she searches the ground for small insects and, if lucky, a few berries.

Many creatures are like us in the sticky heat of summer; we search for creative ways to stay cool, offering relief from the warming climate. As summers get hotter, everything must adapt to survive the heat, but this is no easy task.

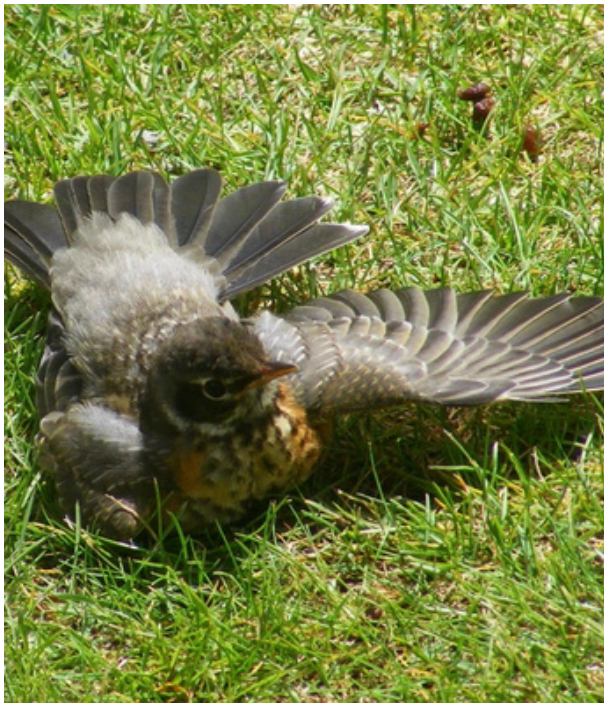
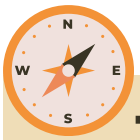


Figure 4. Using thermoregulation, A robin spreads its wings over a cool lawn in summer. Photo: Kelli Spandl, 2013.



Time to Explore!

Next time you find yourself in the forest at midday in the summer, notice how quiet it gets. Not many times can one observe the forest without the creature noises. Snowstorms and hot summer days are great times to hear the eerie silence.
Listen closely for any sounds or movements.

What do you hear? What do you think it is? Does the forest feel a little different without the bustle of bird songs or crunches from squirrel paws?

COMMON MILKWEED

Asclepias syriaca

Asclépiade Commune

"Firework Flowers"

A little bumblebee buzzes peacefully through the summer breeze. It stops from flower to flower, picking up pollen as it goes. As the bee rounds the corner of a large maple tree, it spots the wide pink flowers of the milkweed, one of its favourites. These plants can be hard to find, so when the bee finally does, it buzzes its wings with excitement and hurries over. Each tiny pink flower is perfect for transferring pollen, and the broad, vibrant leaves make a great place to rest its tiny wings between passes.

After a short and graceful pollination, the bee is satisfied with its work and returns to the hive, making sure to tell its bee friends about this great new spot! While the bee is not the only critter who fancies the milkweed, the monarch butterfly relies on them to fulfill their life cycle. They use the plant as food and a place to hang their chrysalis as they transform as vibrantly as their host plant.

Much like a fireworks display, this amazing plant undergoes various transformations during its growing season. From seed to seedling, it becomes a stalky stem, and the flower erupts like a firework before a pod forms. Finally, the pod opens to disperse its silky seeds into the air.

Common milkweed is a key component of meadow and suburban roadside habitats. Protecting its growth is vital for various ecosystem functions.

Figure 5. A flowering common milkweed. Photo: MyWildflowers.com, 2018.

Did You Know?

During World War II, a milkweed seed and floss factory opened in the USA. The factory used the silky insides of the seed pods as stuffing for soldiers' life jackets.

Over two million pounds of raw plant material were used to create 1.2 million life jackets. This plant helped save thousands of lives during the war—it is an unlikely hero!

WHITE OAK

Quercus alba
Chêne Blanc

"With'oak' You, We Don't Thrive"

A statement of summers here in Peterborough is the abundance of towering trees. It is such a sweet moment when you realize the canopies are full again for another season, with their vibrant leaves rattling in the breeze. Shadows and dappled light shape the ground cover and make sitting beneath their shelter a welcome coolness from the summer sun. When the Camp Kawartha Environment Centre first opened in the Trent Nature Area, staff planted white oak trees to build up the biodiversity of the open fields. These trees now produce acorns and shelter much of the East Field. To go back in time, the areas around the Environment Centre would look a lot less lush than they are now, and thanks to the staff's hard work, an excellent range of species has been introduced into this land.

Oak trees are a sign of strength and resilience, providing habitats for hundreds of species. Mammals, birds, insects, and fungi rely on mature oak trees for shelter, nutrients, and companionship. They are considered a keystone species alongside sugar maple and pine. Oaks support over 500 species of caterpillars, which are food sources for most migratory birds and their babies. Without big trees, there are fewer insects, fewer birds and less cover, dramatically reducing the health of a region's ecosystem. It is always said that the best time to plant a tree is 10 years ago, but the second-best time is today.

Figure 6. An Acorn Weevil. Photo: AskNature, 2020.

Did You Know?

Often, Acorn Weevil larvae are inside oak acorns. Using its long snout, the weevil drills a tiny hole into the center of a green acorn, then lays its eggs inside.

Once the eggs hatch, they feed on the nuts until they drop in the autumn, where the grubs live in the soil for 1-3 years before maturing into an adult weevil, and the cycle repeats.

AUTUMN

“Season of Refelction”

The sunlight slowly begins to reflect the gold tones of a changing tree. Bright reds, oranges, and yellows take over the green leaves. Squirrels, chipmunks, and birds begin storing food away, anticipating the colder weather. The last of this year’s harvest season draws close, and everyone takes advantage of the final fresh produce before the frost. Like clockwork every year, we forget to reflect on the warmth, appreciating the sunlight only after the days grow shorter. We will soon long for the first signs of spring, forgetting to admire the beauty of winter.

Photo: Eve Lockhart.

SHORT-TAILED WEASEL

Mustela erminea

Hermine

"A Stoat by Many Coats"

One crisp day in autumn, a familiar pair of creatures are engaged in a class game of 'cat and mouse' but rather 'stoat and rabbit.'

The Eastern Cottontail rabbit dashes left, then right, under a bush, and around the tree. Panting out of breath and scared for her life, she attempts to outrun the pesky cinnamon-coloured stoat hot on her tail. This menace of a creature had been taunting the poor rabbit whenever she tried to sneak over to The Shelter for her favourite clover variety. The two chased each other for hours, with the rabbit always making a swift escape, tired but safe in her burrow.

As winter dawned, the days grew shorter and nights colder. The rabbits managed to avoid the stoat for a few weeks while she bulked up for winter uninterrupted.

But THERE! Something is running at her, making soft crunches under the fallen leaves. She knows this game all too well, but the Stoat looks different...
He isn't his usual soft brown but rather spotted with white all over. Could this be the same creature taunting her? Without time to think much more, the rabbit ran her usual course around the landscape, avoiding this little predator's grasp.

Once back in her burrow, she thought about the stoat's interesting changing appearance. Nothing else dramatically changes colour like that here.

Could he be magic?

After another few weeks, the snow had landed on the ground, and the world around the rabbit began to slow down.

Figure 7. A Short-Tailed Weasel with its signature warm brown coat, white underbelly, and black pointed tail. Photo by Peter McGregor, iNaturalist.

SHORT-TAILED WEASEL

Mustela erminea
Hermine

The rabbit wanted to try searching for something to eat, so she wandered over to The Shelter, cautiously searching for the stoat to approach.

Off in the distance, she saw the snow ruffle, and movement appeared. This time, a fully white creature popped out, who looked awfully like the stoat from before, just a different colour AGAIN. What was happening?

The rabbit was stunned at this discovery, so shocked that she failed to run like she used to. Her lack of movement shocked the stoat right back, who stopped right before her.

"Why aren't you running like you normally do?" He asked.
Wait! It is the same creature as before the rabbit realized.

"How do you keep changing colours, Stoat?" She asked in awe. I wish I could do that!"

"Well, during the winter, as the days get shorter, I produce less pigment, which gives me my colour in the warmer months. I can be called an Ermine when I'm all white, too. I can blend in better with the snow so that I can do THIS," and he took off after her once again.

See page 5 for a map to The Shelter

Now, with answers, the rabbit began to run; she was still confused but figured there were things in nature she may never understand; she accepted him now as a different colour even if he chased her endlessly. The pair continued the chase until, one day, the ermine succeeded in his hunt.

Everything must be eaten, and despite the rabbit's best efforts, she grew older and knew it was a matter of time before she got caught. The cycle of growth and decay continues, and the bones left by the rabbit will fuel the soil with many nutrients. The hunt allows the ermine to grow and expand his family of little weasels in the spring. Nature is bold and, at times, brutal, but when we distance ourselves from its realities, we lose a foundation of knowledge.

Did You Know?

Stoats are a special type of mammal that seasonally moult their fur coats, meaning they undergo a colour change twice a year.
This seasonal moulting is due to the photoperiod (length of day), not temperature. As the days get shorter, stoats produce less of the hormone that controls pigment, meaning the brown coat fades to white. The opposite occurs during the spring.

POISON IVY

Toxicodendron radicans

Herbe à la Puce

"Nature's Charcuterie Board"

Many humans fear poison ivy as a notorious irritant. However, not everything in nature is for humans, and while we avoid it, this plant provides endless benefits to the woodland community. The famous three leaves can grow in most environments, where urban settings and dense woods are the most popular. Poison ivy offers ecological diversity outside the forest, improving the often-disturbed soils of urban spaces.

During the early seasons, these plant leaves provide food and shelter for many creatures. Deer depend on poison ivy and have adapted to feel no effects of its irritating oils. As the plant grows into a bush or a vine, it protects amphibians and insects. Flies, wasps, and butterflies also use its flowers and nectar to pollinate and gain nutrients. Berries form in the fall and are a key part of many creatures' diets. Robins and cedar waxwings are known to eat the berries, passing the seeds throughout the forest.

Poison ivy is known for being hard to get rid of, but this extensive root system anchors the soil, decreasing erosion, an essential feature for open urban environments. Poison ivy's extensive role in woodland stewardship demonstrates that not all plants we consider harmful require constant removal. Reading the land and identifying what lives there can tell you a story about the bigger picture of an ecosystem beyond human interactions.

Figure 8. Poison Ivy berries in the late fall. Photo: Eve Lockhart, 2023.

Time to Explore!

Please don't look for poison ivy; be cautious of it on the land!

However, since it looks different from its summer version, what other common woodland plants can you try to identify even in the fall? Think back to the Mayapple on page 10.

COMMON BUCKTHORN

Rhamnus cathartica

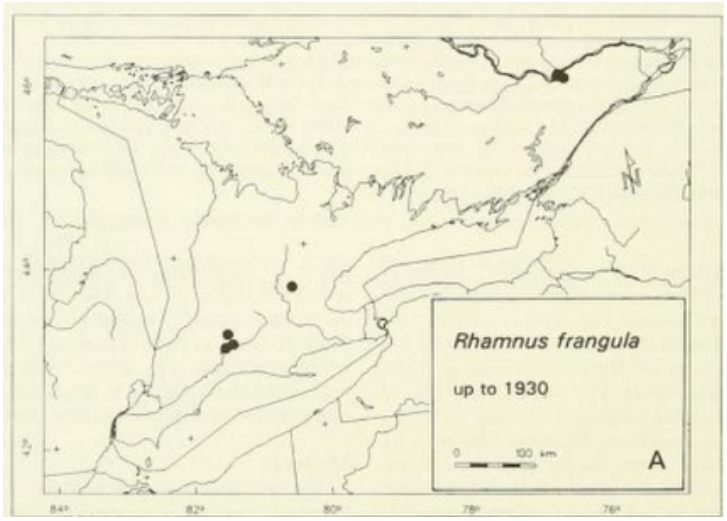
Nerprun Cathartique

"Storytelling Species"

How can the land tell you about its history? Remnants of times past live across the landscape; you just need to know what to look for.

During colonization, many settlers introduced plants from their home countries to Ontario. The impact of this introduction can be seen today through many invasive species. Various species of buckthorn grow alongside native plants inside and outside urban areas.

Buckthorn was introduced to Ontario by English settlers in the late 1800s and slowly spread across parts of the south and eastern regions. These trees and shrubs grow all around the Environment Centre. Were their seeds brought here by birds? Or planted by the farmers of generations past?



Buckthorn grows all around the trails and forest, but many plants exist on what used to be the borders of the old homestead. Just around the Apple Orchard and by the old farmland field markers, these plants grow in abundance, crowding out native species. While people fight to clear invasive plants today, we must consider how much history is held within the land.

Part of the job of invasive species is to remind us how recent our settler history is and how its lasting impact manifests throughout the land, even two hundred years later. Many native species here originated elsewhere, but enough time has passed that they have naturalized to this new land, or the record of their origin is lost and forgotten. Every forest, park space, and roadside ditch tells the story of human movements by the types of plant species that grow here.

Figure 9. The earliest recorded accounts of Glossy Buckthorn, a similar species to Common Buckthorn. Map shows how the species originated in the south, near early settlements.
Credit: Catling, Paul M., & Porebski, Z. Sue. (1994). The history of invasion and current status of Glossy Buckthorn, Rhamnus frangula, in southern Ontario. The Canadian Field-Naturalist, 108(3), 305--310. https://doi.org/10.5962/p.356794.

See page 5 for a map to The Orchard.

WINTER

“Signs of Change”

Cold early morning walks through the woods tell you how chilly winter gets. The trees are bare and crispy, as they sway in the wind. If you listen closely, you'll hear them crack. They crack and pop as temperatures drop well below freezing. As the canopy shuffles in the wind, the branches creak and groan. While they may not get cold like humans, it's funny to imagine the creaks and cracks are the tree's way of shivering or staying warm. Winter changes how the forest feels; it no longer bursts to life with the energy of its critters but is soothed and relaxed under a blanket of snow.

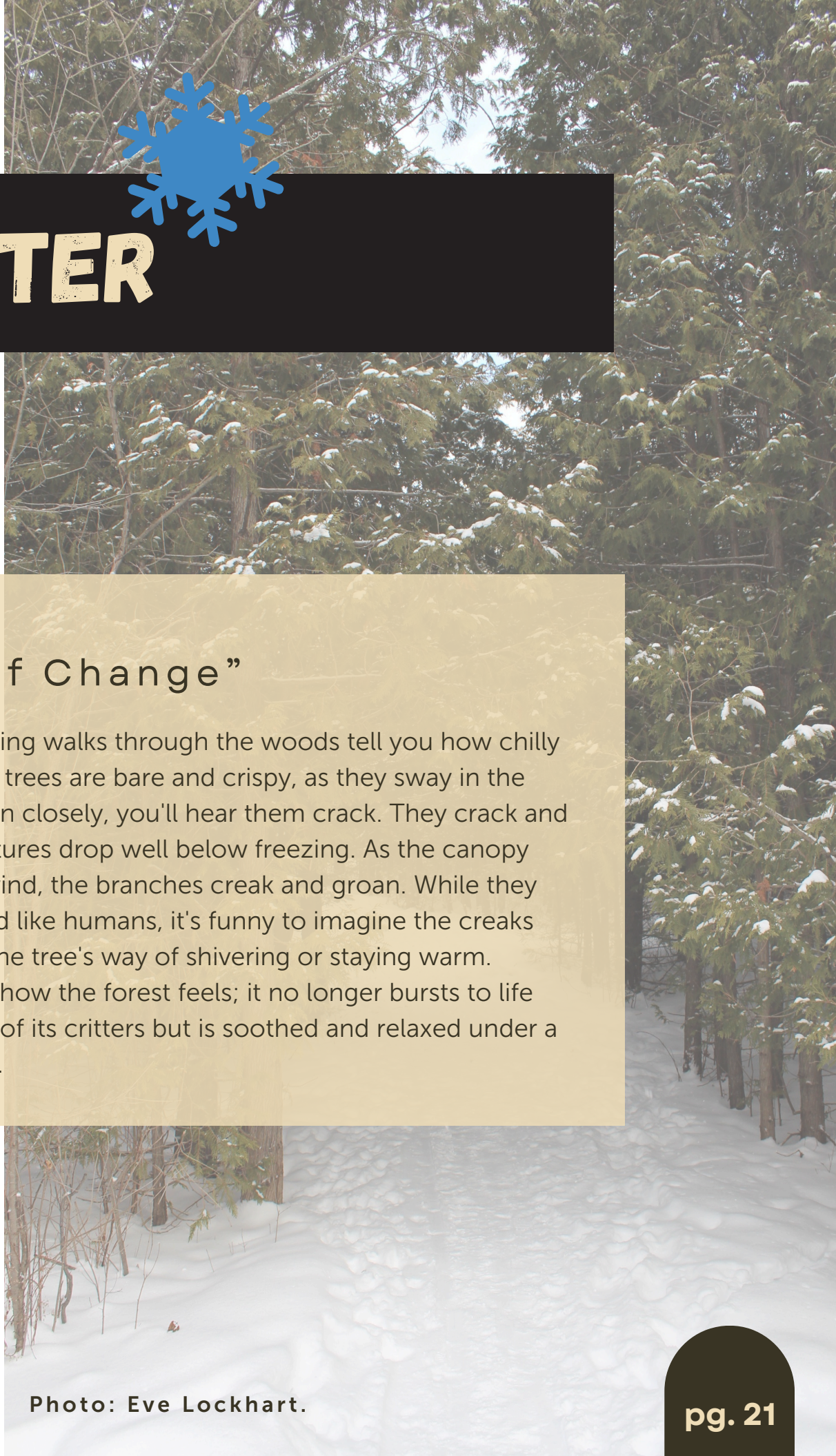


Photo: Eve Lockhart.

WHITE-TAILED DEER

Odocoileus virginianus

Cerf de Virginie

"The Two-Spine Doe"

Time stands still as the sun rises over the frosted landscape. Crisp morning rays bounce a symphony of light through the canopy of white cedar, illuminating a slowly waking herd of white-tailed deer. Blanketed with fresh powdery snow, today, The Boneyard has become a haven for this herd to eat and sleep.

Just a few days from now, the family will take a morning stroll through this area and see the outlines left behind in the snow by the deer. One shape will stand out against the rest, the outline of two spines. The family jokes, and questions how the deer can leave the imprint of two spines in the snow, asking if the deer was more than meets the eye or if this spot tells a story about the restless behaviour of deer in suburban environments. While things in nature can appear mystical, the answer is sometimes more obvious if you dig deeper.

The white cedar trees of The Boneyard provide a canopy during winter, protecting the herd from heavy snowfall, wind and freezing temperatures. Huddled together for warmth, this herd must conserve its waning energy as temperatures drop.

Despite these harsh conditions, female deer become pregnant and endure nature's worst while caring for their unborn calves. Later, giving birth in spring when resources replenish, these creatures live alongside nature's cycles.

Figure 10. Deer tracks in the snow. Photo: Katherine Lukens, 2015.

Did You Know?

The Boneyard is a prime Deer Wintering Area (DWA). These habitats are so important for herd survival in sub-zero temperatures.

Clusters of trees sheltered from the wind and snow are key. These spaces often have food sources allowing the deer to properly rest before enduring the elements again.

See page 5 for a map to The Boneyard.

WHITE-TAILED DEER

Odocoileus virginianus
Cerf de Virginie

A new mama doe rises from her spot in the woods. Hungering for breakfast, she slowly begins grazing the forest floor for low-lying plants. She leaves behind a deer-shaped outline in the fresh snow and quiet tracks as she walks away from her sleeping spot. She cautiously approaches the forest opening and makes sure not to stray far from her friends.

As the sun rises, this doe feels tired from the energy she uses. Growing fond of that spot, she lies down again to rest the afternoon away. During the winter, deer can require shelter for days, and locating safe shelters becomes harder as spaces develop for human use.
days, and locating safe shelters becomes harder as spaces develop for human use.

Craack goes a truck door as it slams shut behind her. The parking lot behind this wintering area slowly fills with cars on this calm, sunny day.

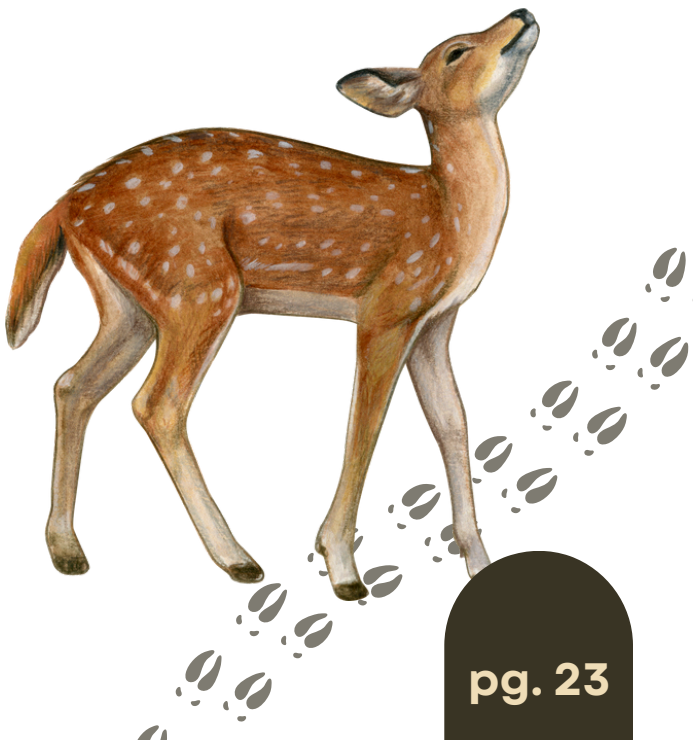
This mama doe throws herself awake, joined by her herd; they rush away, scattering tracks left and right into the snow. Moving swiftly across the swampy grounds, they will continue searching for a place to stay, hoping to peacefully sleep another night away from the harshest of elements.

As time passes, all that's left of this doe and her friends is their outlines snuggled in a circle and the cascade of tracks running far and fast. While each deer shape is like the rest, one stands out as a test for the curious eye. The mama doe's spot has the shape of two spines, one from each time she laid down. Nature leaves behind silly mysteries, each telling a story about the secret lives of forest creatures, something we may never fully understand.

Time to Explore!

After a snowfall, take a walk while keeping quiet, and try to see what stories lie among the tracks left behind in the snow.

Let your imagination create a story around the tracks you see.



FLYING SQUIRRELS

Glaucomys sabrinus (N)
Glaucomys volans (S)
Écureuil Volant

"Not a Bird or a Plane"

During a crisp night in the Silver Maple Swamp, the quiet rush of wind and rustling branches is heard in the distance while the forest sleeps.

What could that be? Most creatures here are well asleep for the season or migrating south. But wait! Up there, another *Whoooosh* and it's gone.

They glide from tree to tree, soaring under the pale moonlight. Flying squirrels... An elusive creature, known for its stealth, often appears well after dusk. In this area, two groups combine, the north and the south bridge the divide.

Only seen at night, these nocturnal little squirrels don't hibernate and rely on the warmth of their friends to survive freezing weather. Even on the coldest nights, flying squirrels still need to wake up and search for food. They store food throughout the canopy, so gliding from tree to tree keeps them warm while they uncover old food stores. Once they return, ready to sleep, these cuddly squirrels snuggle for warmth in groups up to 50. No night is too cold.

During the day, all that is left of a flying squirrels night is the traces of poop they leave behind on rotten longs and fallen trees.

Figure 11. A flying squirrel about to take off from a tree in the winter. Photo: Charismatic Animals, 2024.

Did You Know?

A local group called the Kawartha Flying Squirrel Project is dedicated to a long-term study of the merging North and South species because of a considerable overlap in this region.
For more information, check out their site.
https://flyingsquirrelproject.wordpress.com/

See page 5 for a map to the Silver Maple Swamp.

CEDAR WAXWING

Bombycilla cedrorum

Jaseur d'Amérique

"The Last to Go"

Long after most of the year's food supply is eaten up, many species hibernate or migrate for warmer weather and more food. Cedar Waxwings are special because they are called irruptive migrants, meaning when they decide to leave and how far they go depends on the available food supply.

On cold winter days, the last and greatest source left to pick over is often the Juniper tree and its berries. While these berries aren't true, like blueberries, they are considered the female cone seed of the juniper; they are the most essential final food source of the cedar waxwings' journey to warmer weather. Despite the berries not being the most calorie-dense, birds and other mammals like the chipmunk go wild over them.

It is debated whether these berry-like cones offer any warming effect on the creatures that consume them, much like how juniper gives humans gin. This alcohol causes a warming sensation. They are popular and highly sought after when snow falls and cold winds blow. Additionally, the juniper's branches provide cover for sheltering birds preparing for their big flight.

Figure 12. A Cedar Waxwing eating a Juniper berry. Photo: Marlene Ralph, 2015.

Time to Explore!

Near the end of fall, into early winter, take a calm slow walk around the woods.

What species do you still see? And what are they eating?

DIG DEEPER

Want to learn more about the stories you read? Here are some references!

SPRING

Black-Capped Chickadee -

- Sweileh, M. (2024, November 22). *Chickadee Nests: Facts, Habits, and Tips for attracting them*. AvianBliss. https://avianbliss.com/chickadeenests/#Nesting_Habits_and_Tips_for_Chickadees

Quaking Aspen -

- Carpenter, K. (2025, April 18). Pando, the trembling giant. Atlas Obscura. https://www.atlasobscura.com/places/pando-thetrembling-giant

Mayapple -

- *Mayapple, Podophyllum peltatum*. (n.d.). Wisconsin Horticulture. https://hort.extension.wisc.edu/articles/mayapplepodophyllum-peltatum/
- Ramsewak, A. (2022). *Fleshy Fruits - Mayapple*. The Student Encyclopedia of Canadian Indigenous Foods. http://www.firstnationsfoods.org/

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Want to learn more about the stories you read? Here are some references!

SUMMER

American Robin -

- American Robin. (n.d.). *Audubon*. https://www.audubon.org/field-guide/bird/american-robin
- Ruuskanen, S., Hsu, B., & Nord, A. (2020). *Endocrinology of thermoregulation in birds in a changing climate*. Molecular and Cellular Endocrinology, 519, 111088. https://doi.org/10.1016/j.mce.2020.111088

White Oak -

- Lewis, J. (2025, January 14). *Three keystone trees of Ontario's Forests*. LEAF. https://www.yourleaf.org/blog/justin-lewis/jan-14-2025/three-keystone-trees-ontarios-forests
- Mammoser, S. (n.d.). *Can You Spot the Lie? Oak Trees*. Nature for My Soul. https://natureformysoul.com/2021/06/can-you-spot-the-lie-oak-trees/#:~:text=In%20addition%20to%20the%20acorn,534%20different%20species%20of%20caterpillars.

Common Milkweed -

- Chandler, R. (2019, January 21). *Milkweed History and uses 101*. Save Our Monarchs. https://www.saveourmonarchs.org/blog/milkweed-history-and-uses-101

DIG DEEPER

Want to learn more about the stories you read? Here are some references!

AUTUMN

Short-Tailed Weasel -

- Wren, C. (2022, March 23). *Changing Daylight: How a weasel turns White*. Montana Natural History Center. https://www.montananaturalist.org/blog-post/changing-daylight-how-a-weasel-turns-white-2/#:~:text=Ermine%2C%20like%20ptarmigan%20and%20snowshoe,natural%20pigments%20in%20their%20bodies.
- Zimova, M., Hackländer, K., Good, J. M., Melo-Ferreira, J., Alves, P. C., & Mills, L. S. (2018). *Function and underlying mechanisms of seasonal colour moulting in mammals and birds: what keeps them changing in a warming world?* Biological Reviews/Biological Reviews of the Cambridge Philosophical Society, 93(3), 1478–1498. https://doi.org/10.1111/brv.12405

Poison Ivy-

- Mathes, R. (2019, October 24). *Poison ivy is the wildlife salad bar of the woods*. Tallahassee Democrat. https://www.tallahassee.com/story/life/home-garden/2019/10/24/poison-ivy-wildlife-salad-bar-woods/4076245002/
- Sterne, K. (2023, May 24). *Poison Ivy: The Ecological Importance of this Native Plant in Westchester County* . Plan it Wild. Plan It Wild https://www.planitwild.com/news1/poison-ivy-the-misunderstood-native-plant

Common Buckthorn-

- Catling, P. M., & Porebski, Z. S. (1994). The history of invasion and current status of Glossy Buckthorn, Rhamnus frangula, in southern Ontario. The Canadian Field-Naturalist, 108(3), 305–310. https://doi.org/10.5962/p.356794

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Want to learn more about the stories you read? Here are some references!

WINTER

White-Tailed Deer -

- Wiley, J., Hulsey, C., Maine Department of Inland Fisheries and Wildlife, & Small Woodlot Owners Association of Maine. (2010). *How deer survive winter.* Maine Fish and Wildlife Magazine. https://www.maine.gov/ifw/docs/deer_yards.pdf

Flying Squirrel -

- GreenUP. (2021, January 28). *Four hidden wonders of nature that winter has to offer*. kawarthaNOW. https://kawarthanow.com/2021/01/28/four-hidden-wonders-of-nature-that-winter-has-to-offer/
- Kawartha Flying Squirrel Project. (n.d.). https://flyingsquirrelproject.wordpress.com/

Cedar Waxwing -

- Brodwin, M., & Brodwin, M. (2023, December 9). *Do Cedar Waxwings fly south for the winter?* Birdful. https://www.birdful.org/do-cedar-waxwings-fly-south-for-the-winter/
- Cubie, D. (2015, January 26). *Junipers Help Birds Cope with the Cold*. National Wildlife Federation. https://www.nwf.org/Magazines/National-Wildlife/2015/FebMarch/Gardening/Junipers
- Pike, S. (2017, February 18). *A top winter snack for birds, mammals.* Foster's Daily Democrat. https://www.fosters.com/story/lifestyle/2017/02/18/nature-news-juniper-berries-great-winter-snack/22436974007/