A Guide to the Hale Family Woodlands Nature Trail



Traverse the trails with this handy map to lead the way!

Plants



Sensitive Fern (Onoclea sensibilis)

Sensitive fern prefers wet soils and shaded areas. It is found in lowland woodlands near vernal ponds and swampy areas. It will grow in direct sunlight but requires an area such as a eutrophying pond where water remains throughout the year. It is one of the few ferns that will get “moth eaten” by preying insects. Sensitive fern has a once cut frond. Each sub-frond is broad with little dentition

Fiddlehead (Matteuccia struthiopteris)

Fiddleheads are early, unfurling ferns. They are picturesque and fun to look at. Several common species unfurl in much the same way and all are considered fiddleheads.





Hay-scented Fern (Dennstaedtia punctilobula)

Hay-scented fern likes relatively open woodlands. It likes moist, deep soils. It is often found on shaded hill and mountain sides. If you examine the back of the frond closely you will see tiny little hairs scattered throughout. These pili are
It has an aromatic scent that compares nicely to new mown hay. Although this scent appeals to us, livestock find it offensive. Early colonists planted it, or more likely just let it grow, in their front yards as a way of keeping the horses, cows, and sheep from soiling their front yards

Herbs



Milkweed (Asclepias)

The milkweed is a common perennial found throughout the world, with many different flower colorations. What makes them unique is the milky juice that can be found within the stem, which contains latex. It is one of the only food sources for milkweed butterflies such as the monarch butterfly, and for this reason is commonly used in butterfly gardens. The plants uses toxins against these predators, but the predators have developed specialized methods to feed on the plant despite their chemical defenses.

Milkweed is also a very important source of nectar for bees, and has a very unique pollination system. Milkweed pollen is formed into sacs and has an affinity for the feet and mouthparts of insects. It will attach to the insect and then be carried to the next plant, where the sac of pollen is then inserted into something known as the anther slit. The milkweed common around the northeast grows tall with large disc-like white flowers appearing at the top, those of which are hollow and coated with a layer of wax. They have a very fragrant smell

Tickseed (Coreopsis)

With a majority of its species native to North America, the tickseed plant is medium sized and won't grow more than 4 feet off the ground. Its flowers appear as a very vibrant yellow, with rounded flower tips that resemble those of a daisy. It is the state wildflower of Florida, and its scientific name coreopsis means bedbug in Greek. This meaning was derived from the shape of its fruit in the center of the flower





Queen Anne's lace (Daucus carota)

Prettier from below than from on top, Queen Anne's lace is a common, white-flowered waste and field plant. It is, in fact, the common carrot gone wild. It is a biennial herb which means the plant lasts two year. On the second year the 'carrot' develops into a barely edible root

Purple loosestrife (Lythrum salicaria):
Purple loosestrife is considered a wetland invasive species. The first documented case of purpleloosestrife in this country was by the naturalist John Burroughs. He found it on a farm on Slide Mountain in the Catskills in the 1860's. It became a common wetland plant along the Wallkill River and gradually spread to several wetland areas along the New York Thruway where it remained in check until the 1990's. It has now spread up and down the east coast and into the mid-West.



Several beetle species have been found to feed on the stems and leaves as larva. It is hoped that they will put an end to the rampant spread of this plant. Although the flowers are a good source of nectar for bees, the plant also crowds out the naturally occurring plant life like cattails. This imbalance creates disruption in the food web and niches of the wetland habitat



Yarrow (Achillea millefolium)
Yarrow is native to temperate regions of Asia, Europe and North America. Growing to be around 3 and a half feet tall, yarrow flaunts a slightly fuzzy stem and evenly distributed leaf pattern. At the top of the plant is a white disc-like cluster of white flowers which have a strong, sweet smell similar to chrysanthemums. They prefer to grow in grasslands and open forests, where they attract strong pollinators such as wasps and ladybugs. In the past yarrow was frequently used for its ability to stem bleeding in wounds, cuts and abrasions, which earned it the nickname soldier's woundwort

Blue stemmed grass (Andropogon gerardii)
Bluestem grass is a tall grass that typically grows largely in parts of central and eastern North America, preferring prairie and great plain regions. It is called blue stemmed because as the grass grows and matures, you can notice the base of the plant turning a blue or purple color. It grows very dense and has amazing root systems,
which allow it to grow back quickly. High in protein, this grass is commonly used as hay for cattle and horses.



Common St. Johnswort (Hypericum perforatum)



This is a pretty five-petalled flower of fields and waste areas. It is the ingredient in St. Johnswort health supplement. It supposedly improves your memory. It also enhances your ability to sunburn. In fact cows and goats with white, thin fur can sunburn after eating St. Johnswort so badly that they will slough these patches of skin exposing raw flesh. This won't happen with one or two plants but if they are turned out into a field of St. Johnsort with little else to eat they will graze on it as a last resort. In spite of this hazard, it may be the reason that some cows and goats have such good memories

Chicory (Cichorium intybus)



Chicory is another field and waste area herb. It is well known for its chicory coffee and is steeped in folk lore. Linneaus, a famous eighteenth century biologist, created a clock that told time by the opening and closing of the petals of flowers. He used chicory as one of the time-tellers because it blooms at daybreak and folds with the first heat and direct sunlight of the day. New blooms occur daily.

A little known fact about chicory is its ability to make you become invisible. On the full moon of July, exactly at midnight, if you cut the root with a sharp knife you will become invisible for an hour or so. If you try it and it doesn't work it may be that you are using a knife that is too dull. Then you have to wait a full year to try it again. And it has to be exactly at the stroke of midnight. If you are fortunate enough to have a blue moon in July, you will get to enjoy being invisible twice in one month

Japanese knotweed (Fallopia japonica)



Appearing as a bamboo-like plant, the Japanese knotweed grows very strongly and is so successful that it is considered one of the world's worst invasive species. It is native to Eastern Asia, but has made its way into North America and Europe. It has hollow stems and can grow to be a staggering 12 feet tall. The flowers appear in erect strands of small, white buds atop the stems. The knotweed is used as a source of nectar for honey bees. The young stems can also be eaten by humans, and has a taste similar to sour rhubarb.

Dandelion (Taraxacum)

Everyone knows dandelion. One of the great hoaxes of the twentieth and twenty-first centuries is that dandelion is ugly. This has been perpetrated by chemical loving people who wish to destroy the Earth. Look at it. It is downright beautiful! People who claim it to be ugly are soulless narcissists who can't stand beauty when it occurs naturally. They think that God and Mother Nature are helpless novices in the areas of environmental and biological designs.



Dandelion makes a good salad if picked fresh. Leave the root so that the delicate shoots and flowers will regrow. If you should come down with warts, dandelion to the rescue! Apply its milky sap directly to the offending dermatological eruption every day until the wart disappears. If it itches while the milky white sap dries, do not scratch it. The itching means that the medicine is working

There is that whole wine thing, too.



Skunk cabbage (Symplocarpus foetidus)

Native to eastern North America, skunk cabbage prefers to grow in wetlands. This plant releases a foul smelling aroma which attracts its pollinators and discourages other animals from approaching. While not harmful to the touch, the leaves of skunk cabbage will burn the mouth, and for this reason they may be dried and incorporated into soups and stews. Strangely enough, skunk cabbage is also one of the very few plants known to perform thermogenesis, which is the process of heating itself above the temperature of the air. As a spring bloomer, the plant uses this ability to melt the snow surrounding it, warming up the icy soil and allowing it to sprout. Because of their contractile roots, they effectively grown downward, getting deeper and deeper each year, the oldest of plants are almost

Red Clover

The red clover has become naturalized in North America, and is commonly used when making sweet teas. The flower grows very close to the ground and normally grows in a trifoliate pattern (three leaflets), and flowers with a beautiful purple color. Some people believe that the appearance of a four leaf clover is able to bring good luck to the one who picks it out of the ground.



Phragmites (Phragmites australis)

Phragmites, also known as the common reed, is a large perennial grass which grows predominantly in temperate wetland. As they grown, the tops of the plant look like fluffy tails, and are used to spread seeds horizontally as the wind blows. They form extensive reed beds which can grow in damp soils, sands, and water up to a foot deep. These reeds are known to grow to be 5-6 meters tall given hot weather and fertile soils. Their growth is very difficult to control without the natural grazing of animals and may cause problems for other hydrophyte wetland plants of North America. Phragmites may also be fastened into flute-like instruments, which are commonly used by the people of Iran and its neighboring countries





Greater Celandine (Chelidonium)

Greater celandine is a perennial plant native to Europe and Asia that has since been widely introduced to North America. Belonging to the poppy family, Greater celandine is a late spring bloomer with 4-petaled flowers that are yellow in color. The plant itself stands erect at around 30 to 120 cm high, with black seeds carried in the long capsules at the center of the flower. In order to pollinate, the seeds contain chemicals which attract ants that then carry the seeds away to sprout elsewhere. When injured the plant relies on a defensive mechanism that releases a type of yellowish colored latex which irritates the eyes and skin

Buttercup (Ranunculus repens)

There is a wide variety of Buttercups, all included in the genus Ranunculus. They are normally yellow in color, and contain 5 or 6 petals, along with a long smooth stem. Some species can appear red or orange in color. Although beautiful, they are toxic when eaten, and can cause a series of complications including blistering of the mouth.

There is a thoughtful folklore surrounding the buttercup, which plays to its name; People sometimes hold buttercup to their chin, and if a yellow reflection appears on their chin, the person is said to “like butter”. This is a fun way to teach the reflective properties of a buttercup petal



Butter and eggs (Linaria vulgaris)

Introduced to North America, Butter and eggs is a nickname for a species of toadflax. You can find this species of toadflax growing along roads, in sand dunes, or other flatland areas. Sprouting in mid-summer to autumn, Butter and eggs grows close to the ground and the pale yellow flowers cluster together with an orange tip in the middle of each. They closely relate the appearance of the snapdragon plant, in that they have a mouth that can be opened when squeezed at the base, which creates the image of a dragon's mouth. Since these flowers must be opened up to access the pollen, they rely mainly on powerful insects such as bees to open up the flower and extract the pollen These flowers last a long time when placed in a vase, which makes them useful for decoration





Eastern Daisy Fleabane (Erigeron annuus)

Daisy Fleabane is a daisy-like flower that prefers to live in dry and mountainous areas and grasslands. There are a very large number of species of Erigeron that reside in North America. Eastern daisy fleabane appears as a multi-branched plant with erect stems and array of differently colored disc flowers, which can appear in white, pink, yellow or lavender varieties. They are an annual plant that sprouts up around the middle of spring and often populates disturbed areas such as roadsides, railways, vacant lots and other areas which are shrouded in partial shade. The name fleabane refers to a number of species of plants believed to act as flea repellant when dried

Dewberry (Rubus caesius):

Known as the European dewberry, these plants are part of the rose family, and are related to the blackberry. You can find these plants throughout Great Britain, Ireland and in the eastern United States. Dewberries do not grow tall like the blackberry bush but prefer to hang its stems along the ground, which are a bit prickly. The flowers are white, and normally have 5 petals. The dewberry fruit begins as a green bud will ripen between the months of June and September, revealing a berry deep purple in color. The berries are sweet and quite edible; they also contain very few seeds as compared to a blackberry, which make them preferable for things such as seedless jams. When ripe they are very hard to remove from the stem without squishing the berry, so if you are willing to get a little messy they are a great food source, and make delicious cobblers and other desserts



Deadly Nightshade (Atropa belladonna)

Deadly Nightshade is a small shrub that grows to about 5 feet tall. The leaves are oval-shaped and long, and the berries it produces go from green when unripe to a shiny black when ripened. The flowers produced are purple with traces of green and are in the shape of bells. In nature, the plant is found in areas of shade and moist soil. Deadly Nightshade has several names it is known by including "Beautiful Death," "Banewort," and "Dwale."

This plant, often considered a weed, is one of the most toxic in the Eastern Hemisphere. No part of the plant should be eaten unless prepared by a medical professional. The plant is used for medicinal purposes today and was used for things like anesthetics in the past, but has also been used as a poison throughout the ages. People have died consuming just a few of the berries, which are sweet. Both the berries and leaves are toxic, but the root is the most toxic. While wild rabbits and cattle seem to be able to eat the plant without problems, it should never be consumed by humans or domestic animals like dogs or cats





Tiger Lily (Lilium superbum)

Tiger lilies are named after their resemblance to a tiger and its stripes; the lily produces a large 3 inch bright orange flower that commonly has black freckles throughout the petals. They are surprisingly easy to grow and don't require much special care, which makes them a great addition to any garden. The flower has a very sweet smell to it. The tiger lily is almost fully edible, and has a significant medicinal use. The bulbs of the plant are often sold at Asian markets, and can be added to a dish to increase its flavor. The bulbs can also be baked and eaten like a potato. The plant used to be used to assist in easing nausea and vomiting during pregnancy.

Teaberry (Gaultheria procumbens):

The teaberry is a small shrub with evergreen leaves, berries, and white bell-shaped flowers. The leaves have a distinct wintergreen aroma and the berries also taste like mint. The fruit and green leaves both persist through the winter. Teaberry is a favorite food of the eastern chipmunk, and is also eaten by other species including wild turkeys, white-tailed deer, and red foxes.



Lady Slipper (Cypripedioideae):

This orchid looks less like a lady's slipper and more like the head (with feathered hat), bosom, arms, and torso of the lady herself. The only things missing are her slippers. This plant likes woodlands that are somewhere between dry and wet. The plant likes patchy sunlight in predominantly oak woodlands.

The flower petals are closed, which means that the two curved bloomers of the lady's legs fold inward. The anthers and stigma are buried inside. When an insect visits the flower, it has to crawl inside the petals to get nectar. It turns out there is no nectar. To escape the flower the insect has to crawl upwards (behind the ladies bosom) and out passing by the anthers and stigma. Poor insect then does it all over again at another lady's slipper.

It is reported that the deer fly is one of the main pollinators of lady slippers. When DDT was still used as an insecticide the pollinators of lady slippers decreased to such a point that there was a worry that the species might go extinct. Now, after DDT has decreased at least regionally, the deer fly population has increased enough that lady slippers are making a come-back. Thank God for deer flies!





New England Aster (Symphyotrichum novae-angliae)

The New England aster is an herbaceous perennial plant, meaning that it is an herb that lasts for three seasons. It is also known as the Michaelmas daisy. Asters are found almost everywhere in North America west of the Rocky Mountains, with the exception of the deep north of Canada and some places in the south of the United States. Their beautiful color, with a bright yellow center disk surrounded by petals varying from deep purple to white, has made them a very popular plant among gardeners and flower arrangers.

Mustard (Brassica juncea)

Mass produced for its seeds, the mustard plant, as its name suggests, is used to make the very popular condiment mustard. Companies do this by grinding and mixing the seeds with water, vinegar or other liquids to form mustard. The plant itself is medium in size and sports long green stems, which bloom into vibrant yellow flowers



Binder Weed (Convolvulus arvensis)

Binder weed is part of the morning glory family and is an invasive species in North America. It sprouts a trumpet-shaped flower, which normally appears light pink or white in color. Binder weed normally flowers in the summer. It is able to climb and creep its way up inanimate objects and other plants. Although beautiful, it is often an unwelcome plant in gardens and crop fields; as it often causes crop damage due to its robust and rapid growth cycle, which is aided by its extensive root systems. One binder weed can produce up to 500 seeds, and the seeds remain viable in soil for up to 20 years





Ox-eyed Daisy (Leucanthemum vulgare):

Ox-eyed daisy is a wild perennial wildflower that is mostly found in open grasslands. It looks very similar to a common daisy, with white zigzag edged petals and a yellow center disk, but the 2 inch size of its flower is noticeably larger than most other varieties. They bloom from late spring till mid-autumn, and produce a large amount of flat seeds that disperse to the surrounding soil and can remain viable for up to 3 years. Ox-eyed daisies are fairly adaptable, but preferentially grow in meadow or under open-canopied forests. They are native to Europe, however they have been introduced everywhere from North America to
Australia, and are considered by many to be an invasive weed due to their propensity for outcompeting local wildflowers and other plants.

Black-eyed Susan (Rudbeckia hirta):

Sometimes known as the yellow daisy, black-eyed susans are extremely similar in appearance to ox-eyed daisies. As suggested by the name, the flower has a solid black center disk surrounded by yellow petals. It blooms in late summer and early autumn, and has four different main varieties that are found in different locations. One can be found only in Florida, one in the southeastern United States, one in the northeastern United States, and one is dispersed through most of North America. Black-eyed susans were believed by many Native American tribal nations to be useful medicinal herbs. They would use it to treat infections, colds, and even snake bites. Still a popular flower today, black-eyed susans were made the state flower of Maryland in 1918.



Cattail (Typha)

Cattails are members of the genus Typha. They are wetland plants, and are usually one of the first species that can be found growing in newly exposed areas of wet mud. This is partly due to the fact that they use a wind-based method of seed dispersal, sending many small seeds floating off to find potentially fertile ground, giving their species excellent ecological mobility. Cattails are tall plants, and often outcompete other species living in wetlands by growing thickly and blocking the sunlight to everything below. They have extremely well-developed aerenchyma, which is a term for the air channels in the stems and roots of some plants that can help to transport oxygen and other gases. Even dead cattail stalks can still transport oxygen, making them very tolerant of submersion in water. Cattails are mostly edible, and in fact the outer layer of young plants is sometimes referred to as Cossack asparagus in Russia



Wild Morning Glory (Calystegia sepium)



One of the many species of binder weed, wild morning glory is a common vine found throughout both the Northern and Southern hemispheres. Its seeds are poisonous, enough to make most animals sick upon the ingestion of just a few and to discourage any further attempts to eat the seeds. The seeds are also very hearty, remaining viable as long as 30 years after being dispersed from the vine. Morning glory flowers occur from the end of spring to the end of summer. They are shaped like trumpets, and tend to be white, pale pink, magenta, or blue in color. They have thin stems with heart-shaped leaves. Interestingly, not all the flowers on the vine bloom at the same time. Every morning at least one new bud opens and a flower appears. These flowers are especially attractive to birds and butterflies, which along with the very beautiful colors induces some people to ignore their classification as a weed and plant them in gardens.

Wild Strawberry (Fragaria vesca):

What can be better than wild strawberries? Tasty, pretty, preferred by everyone. Eastern box turtles will sometimes arrive at a spread of wild strawberries a week before the berries are ripe and wait for them to ripen



Deciduous Trees



Black oak (Quercus velutina)
There are about 50 different species of oak in North America. In New England the most common are Black, white, red, scarlet, post and chestnut oak. Here Ted the Dog tries to climb a small black oak



Red oak (Quercus rubra):
Red oak has a long strong trunk. It is deeply furrowed. Its leaves are deeply cut and pinned at the end of each lobe. Its acorns are small and bitter.



White Pine (Pinus strobus)
This magnificent pine is common in sunlit areas in both woodlands and along edges and hedgerows. It is certainly the biggest pine in New England, and close to one of the biggest trees. It can gain a girth of three to four people hand holding around its circumference at the base.
Some trunks are long and straight. It was briefly used as masts for ships but the wood's brittleness made it a poor choice. It is a fast grower and great shade giver



Chestnut Oak (Quercus prinus)
Chestnut oak gets its name from its chestnut looking leaves. American chestnut has pins at the end of each wavy lobe, whereas the oak is smooth and undulating

Red Maple (Acer rubrum)
Red maple lives in bottom wet woodlands. It is easy to tell red maple from other maples by its red lined petiole (leaf stem). The seeds are good squirrel fodder. They are good for sticking on your nose. You can tap red maple for syrup making but its yield is low. It is a lot of work, fun to do.





Dogwood (Cornus sericea)
Dogwood is an understory woodland plant that is only really noticed during the spring when it blooms. The flowers are red tipped on each petal. Mythology says it represents the blood of Jesus on the crucifix.

Gray birch (Betula populifolia)
Gray birch is an easy tree to identify. The bark is white, technically gray. White birch is an ornamental tree in southern New England, it occurs wild only in the northern parts of New England and New York. So if you see a white barked tree in the woods, it is most likely a gray birch. Its leaves are eaten by a number of insects that provide food for migratory birds. Its wood is soft and supple. Heavy snows can bend even tall gray birch to the ground without breaking the trunk. When the snow falls off or melts the tree will spring back to approximately the original conformation





Black Cherry (Prunus serotina)
Black cherry is a fascinating plant. It is both giver of fruit and poisoner of beast. It grows in bright sunlight, so along edges, hedgerows and roadways

Black locust (Robinia pseudoacacia)

Black locust grows in bright sunny dry soils. Without sun, it quickly dies, but does not go away. There is probably no other wood in New England that is as resistant to decay as black locust wood. It is so resistant that it can be submerged in water and mud as the posts for a bridge and dock and still be firm and supportive a hundred years later.

The leaves are poisonous to eat, but the flowers can be fried and eaten like fritters. The locust has thorns, so beware. They are strong, brittle and resist breakdown in the body. A broken thorn under the skin can last for years. For this reason it is best not to climb black locusts.

Because of its clear predilection for sunlight and its resistance to weathering, black locust becomes a useful plant for interpreting historic landscapes. If you find the remnants of a black locust tree in the woodland it is a clear signal that once years before that the area was once an open field





American Beech (Fagus grandifolia)

This is a stately tree in woodland or out. Its bark is a smooth gray which makes it easy to tell from other trees. The leaves are very leaf looking. They are bright yellow green in the spring, dark green in during the warm months and bright yellow in the fall. The leaves persist till spring time as a delicate tan dried shell. Hard storms will rip some off but the new buds kick most laves off during the spring.

Sweet Pepperbush (Clethra alnifolia)

Sweet pepperbush, also known as soap bush, is a lowland, moist understory shrub. Its flowers are highly attractive to bees for its fragrant nectar. When in bloom lowland woodlands take on a sweet floral odor. The name soap bush comes from the fact that the flower heads can be used as a bubbling, cleaning soap.



Honey suckle (Lonicera periclymenum)
Honeysuckle is an understory shrub of edges, waste areas, and hedgerows. The flowers which bloom from springtime till late summer are fragrant and a source of nectar for bees and other pollinating insects. The flowers come in a pale white and then in a creamy yellow. The yellow flowers are the ones that have already been pollinated and are closing down for seed and fruit development. You can pull the center blossoms out of the flower and find a very tiny droplet of nectar. If your tongue is young you can get a very tiny sweet treat.





Ginkgo (Ginkgo biloba)
This is an ornamental tree in this part of the world. They are often planted along roadways and in parks. There are girl trees and boy trees. The girls, of course, make the fruit. This tree is well represented in the fossil record and was thought to be extinct by Western paleontologists until the middle of the twentieth century when it was found growing in central China.
It is a bright green in summer and bright yellow in the fall

Sumac (Rhus glabra)
There are three common sumac species in our areas: staghorn, smooth and poison. Forget the poison variety. Unless you are an inveterate swamper it is unlikely you will contact with it. Smooth is common, staghorn is commoner. Staghorn derives its name from its furry branches that resemble a buck's antlers in velvet. The smooth sumac has no such furriness.
The bright red flowers are clumped into spindle shaped clumps. These are high in pectin and can be used to make jelly and tea. In either case, just know that you will get your year's quota of insect protein. These flower heads are home to many insects.



Red cedar (Juniperus virginiana)

Red cedar grows in sunny, dry soils. It is a pioneering plant, meaning that it is one of the first plants to overgrow a fallow field. (So are black locust, black cherry and white pine).

The early and low branches of the cedar have very sharp, prickly needles that protect the young plants and the low branches of older trees from grazing. The upper and older needles are soft. It has a piney fragrant scent when crushed.

The wood of the red cedar, like black locust, is also very resistant to rotting. It can be found for years afterwards in shaded woodlands where it had once colonized a former field. It is often used as posts for fences.

If you crush the pale blue berries you will get the scent of gin for which they are the flavoring. The red wood is also very aromatic and is used in cedar closets to drive away silvermoths





Poison Ivy (Toxicodendron radicans):

This is a common plant with a sordid reputation. It likes dry areas, wet areas, bright sunlight, and shaded areas. It likes edges, woodlands, waste areas and fields. It is difficult to identify because it grows in so many habits: vine, creeper, shrub, and herb-like. Sometimes the leaves are shiny, dull, red, green, toothed, smooth, and so on. The leaves come in three, but then so do many other ground plants. The berries come in white clumps and are eaten by at least a hundred species of birds. It is just humans that have the hypersensitivity reaction. Dogs can carry the oil on their fur if they have been running through it

European Bittersweet (Solanum dulcamara):

European bittersweet is an invasive vine. There is an American bittersweet but it is rare to find now that the European variety has run rampant through waste areas, edges, and hedges. It needs bright sunlight and relatively dry soils. A vine like this succeeds so well because it invests little into its structure. A tree spends a lot of energy in the development and structure of trunks and limbs. Vines have the advantage of just quickly growing up and over reaching the sunlight faster and more efficiently than the tree. Many trees have met their demise under the weight and shadows of European bittersweet.

The berries are beautiful and eaten by many birds



Moss & Lichen



Sphagnum (Sphagnum palustre)
Sphagnum moss likes water and will often grow soaking wet. It was used as a bandage in pioneering times because of its absorbability but also because it has antiseptic properties



Plume moss (Hypnum crista-castrensis)
The fronds of this moss are like a carpet pile. It likes shade and moist surfaces. A very thin layer of soil is all that is needed.



Star moss (Tortula ruralis)
Star moss is one of the few dry soil mosses. It likes bright areas and grows like little miniature forests.



Boulder
Endolithic Crustose Lichen, or boulder lichen, is a highly adaptive variety of lichen that embeds itself in rocks with its body lying above the surface (endolithic). It ranges in color from yellow, orange, red, gray and green. It is inseparable from the surface it grows on, and becomes a problem when it grows on masonry, because removing it will cause damage



Matchstick
This lichen likes decaying wood with a mild amount of moistness. It is a distinctive moss with its red spore heads. It is known as matchstick, and also known as British soldiers.

Mushrooms

Russula

Russula is a common gilled woodland mushroom. There are a number of species and a number of colors. The red variety is edible for some people and poisonous to others. Why take the chance?





Chicken fungus

Chicken fungus is a distinctive bracket style fungus that grows on wood supports in the autumn. These are the spore producing inflorescences. They are edible when cooked and people say it tastes like chicken, hence the name.

Pixie

This is a small gilled mushroom that usually grows in colonies that resemble miniature worlds. It likes moist rotting tree stumps and relative shade.





Turkey tail

There are many varieties of turkey tail fungus. They all grow from dead wood, They are picturesque whorls of growth.

Invertebrates

Harvestman (Opiliones)
Harvestman is also known as a daddy-long-leg. They are not technically spiders, but are closely related. They are predators of small insects and other eat other debris. Their defense is a sickeningly sweet odor. Put one up close to your nose, you will smell how effective it is in the microcosmic world that the harvestmen live





Katydid (Tettigoniidae)
This appealing green insect is most commonly observed in the late summer and early fall. It's bright green color blends it with the greenery of tree leaves. It is well known for its evening call, "katy did". As the temperature falls the "katy" and the "did" get placed farther apart.

Land snail
A land snail is any of the numerous different types of snails that live on land. Snails are mollusks and have shells. The shell is formed in the larval stage and grows with the snail. If there are cracks in the shell, the snail can repair it over time as long as there isn't too much damage. Snails are all over the world and come in a vast array of sizes. The largest are Giant African Snails which can be up to 12 inches in size. No matter the size or shape of the snail, they all have a spiral designed shell. Snails are eaten by a large variety of animals, even other snails. Other animals such as beetles, rodents, reptiles, amphibians, and birds consume snails as well.



Reptiles



Garter snake (Thamnophis sirtalis)
Garter snakes are probably the most common of the snakes, especially in walking areas. They like fields, woodlands, yards, and waste areas. They are harmless and fun to watch. Some dogs find them appealing so watch that they don't maw them



Eastern Box turtle (Terrapene carolina carolina)
Eastern box turtles used to be a common turtle in our area, but are quickly becoming rare because of roadways, dogs, and habitat destruction. They have a long life span that reaches over a hundred years. They are omnivores and will eat berries, grubs, snails, mushrooms, and earthworms. In the winter time the turtles burrow into warm soil or rotting wood below the freeze line

Wood turtle (Glyptemys insculptaI)
Uniquely found in North America, the wood turtle is small and has a pyramid-style design on its shell. They have grayish brown colored skin, and the bottom of their shell is a mix of yellow and black. They are quick for a turtle, and can move up to 0.25 miles per hour. They are also surprisingly good at directions, and are known to be able to easily identify the ways in which they must travel to get to water or to their mating grounds. You will only find these turtles near the water, generally in shallow streams and rivers. They are omnivores and will eat whatever they find on land or in the water. As most turtles do, the wood turtle has the amazing ability to survive a very long time, and can live to be a respectable 40 years old in the wild



Snapping turtle (Chelydra serpentina):
These are the most prehistoric looking and acting animals of our region. They are aquatic carnivores. They prefer slow moving water of lakes, ponds, woodland swamps, and rivers. Their reputations are much worse than their bites. It is rare to be bitten by a snapper, but why tempt fate? Their jaws are powerful. You will see them out of the water during egg-laying season, and sometimes during dry weather periods when turtles are looking for new water.



Encounters with dogs rarely go well for the dog. In early autumn, all the way into November, it is common to encounter silver dollar sized babies that are hatching and making their way to water to spend the winter. If you or your dog encounters one of these, send it on its way. The turtle nests are created on dry ground in areas that may seem that they are long distances from water. In fact, mom snappers rarely go more than a couple of hundred feet from water. Even though there is not a pond or river nearby there might be a culvert, ditch or swampy area nearby. It is best to leave these babies alone



Painted turtle (Chrysemys picta)
Painted turtles are sometimes known as sun turtles. From above they are dark brown colored, from below they are orange, red and yellow. The top side is well camouflaged agains the dark brown bottom of a pond or swampy area. Painteds are omnivores bordering on carnivores. They like insects, snails, small fish that all live in the water. This species often stis on logs in the sun to get warm. They pop off into the water long before you can get to them.

Amphibians

American Bullfrog (Lithobates catesbeianus)



The American bullfrog leads an aquatic lifestyle, preferring to reside in swamps, ponds, and lakes. They feed on whatever they can fit down their throats, and are targeted by large birds, such as the heron, and other large mammals and reptiles. They are normally a muddled green in color, with bright green upper lip and yellow throat. Their croak sounds like that of a bull, which is what gives the frog its name. They use their croaks to defend their territory during breeding season, and are known to form choruses as they continually compete for female attention. Females lay a surprising number of eggs, up to 20,000! Many of these eggs will be eaten by predators, and those who become tadpoles must survive a tough journey to adulthood



Green frog (Lithobates clamitans):

Green frogs are one of the most common frogs found on the east coast of North America, and are frequently found along ponds, ditches and mild waterways. They are distinctively green in color with a grayish/white underbelly. As adults the green frogs are carnivores that can eat anything that passes its mouth: insects, fish, mice, and crayfish; as tadpoles they are herbivorous and eat algae and other aquatic plants.

You can tell the boys from the girls by the size of the tympanum(ear drum). It is twice as big as the eye in the males. Also the males croak and females are silent. They will also hibernate in soils underwater, as a way of keeping warm.

Pickerel frog (Rana palustris)



This small frog is native to North America, primarily the Eastern United States and Canada. Their diet consists primarily of small insects such as ants and beetles. They have evolved an interesting defense mechanism in the form of a toxic substance that they can secrete from their skin. While only mildly irritating to humans, this liquid is dangerous for some of their natural predators. They are naturally brown or tan in color, with rows of dark patches on their back. Pickerel frogs are often confused with Leopard frogs, which look similar and are found in generally the same habitats. The easiest way to differentiate the two species is to inspect the markings on their backs. The markings on Leopard frogs will be oval in shape while those on Pickerel frogs will be rectangular.

American toad (Anaxyrus americanus)

These toads are a common species found throughout eastern North America. They prefer to make their home in ponds, fields and woodlands at different times of the year. The American toad is able to change its skin color from yellow to brown using certain temperatures or stresses as a trigger for the change. They are easily identified by the large warts on their body, and their spotted bellies. They can survive anywhere that has dense patches of vegetation and a semi-permanent freshwater source, as well as a supply of insects. As tadpoles, they produce a chemical that can kill a fish when eaten, which significantly increases their chances of surviving and growing to adulthood





Gray tree frog (Hyla versicolor)

As an inhabitant of the eastern United States, the Gray tree frog is one of the smaller species of frogs, measuring in at an average length of 2 inches. As you could have guessed, they make their homes in trees, and rarely leave except to breed. As a nocturnal frog, the Gray tree frog is mostly solitary and gets its meals through the wanderings of bugs and insect. Similar to other frog species, only the male will croak the female remains silent. The females are also larger, longer and fatter in size.

The gray tree frog is a master of camouflage. It can change its colors depending on its surroundings, similar to a chameleon, but is most adept at changing from white to black. Even as a tadpole, the gray tree frog is known to be able to change its tail color to red when threatened. They are also able to freeze their body temperatures to -8 degrees, to survive harsh weather

Wood frog (Lithobates sylvaticus)

Slightly larger than the Spring peeper, the wood frog measures in around 2.5 inches in length. They also inhabit much of the same regions; the wood frog's habitation is known to expand toward the central and midwestern regions of North America. They are commonly brown or tan, taking on a rusty color and have dark lines around their eyes, no other North American displays these characteristics, making it very easy to identify. Found near vernal ponds, the wood frogs have a surprisingly large area of habitation, and are known to travel up to a mile away from their breeding sites for food. They are omnivores that are known to eat algae, insects, and even the eggs and larva of other wood frogs.



Spotted salamander (Ambystoma maculatum)
The spotted salamander has dark gray or blueish black skin with two rows of orange or yellow spots down their backs. They are considered to be large salamanders because they can grow up to 9 inches long. They reside in dark, damp places such as forests near pools of water or near ponds. They can be found under logs, rocks, and underground. Due to their permeable skin, they must be able to stay moist.
The Spotted Salamander eats spiders, slugs, snails, worms, and other bugs and can also be known to eat smaller salamanders. Their skin secretes a toxin from their backs and tails to deter their predators which are animals such as snakes, turtles, raccoons, skunks, opossums, chipmunks, and squirrels





Red back salamander (Plethodon cinereus)
Red-backed salamanders are common across North America and grow to be about 5 inches in length. They have black bodies and a gray and white belly. While they are called “red-backed” salamanders, not all of them have the color red on their backs. Some other colors seen on the species are light gray, dull yellow, and pink. There are also some that appear to have no colored stripe on their backs and they are referred to as “lead backs.”
Red-backed Salamanders live in forest areas and are found under dried leaves, logs, rocks, and in rotting tree stumps. They come out at night after it has rained to hunt for their food which consists of spiders and insects like ants and mites. When faced with a predator, the two types of red-backed salamanders react differently. The red-backed type stays perfectly still, trying to pose as the toxic red-spotted newt, while the lead phase salamanders tend to run away

Birds

Great-blue Heron (Ardea Herodias)

The great blue heron is a large wading bird found throughout all of North America, as well as Central America and the Caribbean. They usually inhabit the shores of open water or wetlands. Their diet primarily consists of small fish, although they may also eat crabs, shrimp, rodents and other small mammals, reptiles, and small birds. Great blue herons locate their food by sight and spear their prey with their long, sharp bill. Herons usually swallow their prey whole and as a result; great blue herons are known to choke on prey that was too large. Herons tend to breed in colonies which can range anywhere from 5 to 500 nests, and are on trees close to lakes and other wetlands. Females may birth three to 5 pale blue eggs. The great blue heron is a large bird and so has very few predators in its adult life. However, predators of the heron eggs include crows, hawks, black bears and raccoons.

Interestingly, there is a specific subspecies of great blue heron that has white plumage. This bird is named the great white heron, and was once thought to be a different species. These birds live only in south Florida and the Caribbean. Another interesting fact is that males usually incubate the female's eggs for up to 11 hours each day, while females incubate for the remainder of the day. The eggs are left without incubation for 6 minutes every hour





Saw-whet owl (Aegolius acadicus)

These are tiny owls only growing to about 8 inches tall and have large heads with bright yellow eyes. They are mottled brown with a whitish face and white spots on their heads. During the day they roost in dense forests at a low level. They are usually never seen even if you are close to them.

At night they hunt for mostly small mammals like mice, voles, and shrews at the edge of the forest but they will occasionally eat bugs as well. Their predators include Eastern Screech Owls, Great Horned Owls, Cooper's Hawks, and Broad-wing Hawks. Their calls are shrill and whistle-like.

Pied-billed grebe (Podilymbus podiceps):
The pied-billed grebe is a small brown bird, with a thick beak that changes to silver and black in the summer. Found mostly in ponds throughout the Americas, their brown plumage helps them camouflage into the marshes they call home. These grebes are expert divers —able to dive about 20 feet or less—and rarely fly. They feed on large crustaceans, as well as fish, amphibians, insects, and other invertebrates. These grebes are found mostly in central northern, and northeastern Canada, but will migrate as far south as Central and South America when their waters freeze for the winter. Pied-billed grebes are incredibly sensitive to human disturbances, which may be a reason why their numbers are declining in New England. Parents may abandon their nest if disturbed. Even waves from boats may capsize pied-billed nests. Due to the thick and soft nature of their feathers, these grebes were hunted for decorating hats and making earmuffs in the eastern United States, in the 19th century. Nesting in New England has been declining since the 1850s and they are rare finds in local ponds





Screech owl (Megascops)
Owls are some of the most unique animals in the world with many fascinating characteristics that separate them from any other animal on the planet. Screech owls, however, are very special owls that are quite often easily distinguishable from other types of owls. They have a very unique look and an even more unique sound. While Screech owls grow to be only seven to ten inches tall, the noise they emit can be extremely loud. It is an eerie wail that echoes very loudly through the trees of the forest in which the Screech owl is living. This wail can send chills down the spine of anyone unaware of the source.
Like other owls, the Screech owl is nocturnal, doing its hunting entirely between dusk and dawn. Most of this hunting is done within the first four or five hours after the sun sets and almost always occurs in the woods. Occasionally, these owls will hunt for prey in open fields or other places where they feel they may find a meal. For such small animals, they are very aggressive hunters, often capturing chipmunks, rats, squirrels and small birds as well as many different types of insects. Smaller prey can be swallowed in one piece while larger prey is shredded with their talons. They are most often heard after dusk with a descending whistle tremolo

Common Mergansers (Mergus merganser)

Common Mergansers (Mergus merganser) are the largest mergansers and are also called sawbills, fish ducks, and goosanders. The oldest merganser known has lived to 13 years of age. They are commonly found in flocks of 10 to 20 in freshwater rivers and lakes, diving on the surface to catch fish upstream. Their narrow bill contains teeth that are helpful in holding onto the bodies of fish. The female merganser has a grey body and a reddish-brown, crested head, whereas the adult male merganser has a white body with some grey and black feathers along its back, and a dark green head. Breeding female mergansers uses the natural tree cavity, a woodpecker hole, or an abandoned hawk nest located in forests nearby water for nesting. After 24 to 48 hours of hatching, the ducklings are able to leave their nest by leaping out of the nest.



The male abandons the nest and stay in flocks for food, while the female waits through the incubation period and eventually guides her ducklings to forage for food. While the merganser is foraging for fish, some gulls and bald eagles trail the flock in order to steal the merganser's prey as it emerges from the water. Although their diets mainly consist of fish, they can also feed on aquatic invertebrates such as insects, mollusks, crustaceans, and worms. Common mergansers use the strategy of brood parasitism by dumping their eggs into the nests of common goldeneyes and hooded mergansers. By having other birds raise their offspring, they have the advantage of producing more offspring and foraging. In North America, the common merganser population is stable. However, in Canada, a decline in population was noted. Near a papermill in northern Ontario, common mergansers were affected by humans was the discovery of high concentrations of mercury found in the flesh of a merganser.



American Woodcock (Scolopax minor)

This woodland-loving shorebird has an extremely long bill and large eyes placed high on its head. With very short legs, a round body, and no apparent neck, this unusual looking bird is brilliantly camouflaged against the leaf litter and grasses. The typical habitat of the American Woodcock is wet thickets, moist woods, and brushy swamps. After digging a shallow nest in the moist ground, the female woodcock will lay 1-5 grayish-orange eggs with splotches of brown.



While the American Woodcock can be difficult to spot on the ground, they are hard to miss in the sky. The male woodcock's unique display flight begins on the ground of semi-open fields and pastures at dusk, where he gives a buzzy "peeent" call. After the call, he flies straight upward in a wide spiral to 200-350 feet in the air. At the peak of his flight, where he is usually not visible, the male woodcock zigzags downward while chirping. Finally, he lands completely silently in the exact spot he took off from. This display not only attracts female woodcocks, but also people from all around the eastern US gather to watch this sky dance of springtime



Gray Catbird (Dumetella carolinensis):

This cousin of the mockingbird and the thrasher is a slate-colored songbird that has red feathers under its tail and a black cap. Females and males have the same coloring and straight beaks. The eggs are a beautiful turquoise green, sometimes speckled with red. Aptly named for its cat-like calls, the catbird also mimics the songs of other birds. They live in thickets and dense shrubs and can be seen flying short distances or hopping since they are ground foragers and eat berries, ants, and other insects. While the gray catbird can be found in New England and the Midwest during the summer, it will migrate south in the winter to Florida and the Caribbean. The catbird's song may last for several minutes, sometimes up to ten minutes at a time! The distinctive mew is occasionally accompanied by imitation of frogs and mechanical sounds. They are not fooled by the Brown-headed Cowbird, who tricks other bird species into raising her babies by laying eggs in other nests. In the wild, catbirds can live for more 15 years – the oldest known was 17 years and 11 months old.

Cardinal (Cardinalis cardinalis)

The Cardinal is a, fairly large, long tailed songbird. They are commonly seen as males with brilliant red plumage except for black face and neck feathers. The female usually has brownish-gray plumage with splashes of red. However, not all cardinals are red. There are about 18 variations of northern cardinals, mostly distinguished by their colors.

These birds are often found in low shrubs and trees in pairs in inhabited areas such as backyards, parks, woodlots, and shrubby forest edges. These habitats also house predators such as domestic cats and dogs, Cooper's hawks, loggerhead shrikes, northern shrikes, eastern gray squirrels long-eared owls and eastern screech owls. As songbirds usually do, Cardinals give an alarm call when confronted with these predators.

Cardinals feed on weed seeds, grain, and insects. They also enjoy a variety of fruits. They take advantage of the supplemental food available at bird feeders. Once they are born and adapted to their environment, they spend they're whole life at this location due to their lack of a migration period. They are active during the day, especially during the morning and evening hours.

Although these birds are extremely appealing by color, it is illegal to own a cardinal as a pet because they are a government protected wild bird documented in the Migratory Bird Treaty Act of 1918."





Tufted titmouse (Baelophus bicolor)

The tufted titmouse is very common in the eastern United States. It has a silver gray head and white body, with some light rusty/peach colors running down its flanks. The titmouse has a very thick neck and full body, which makes it look large, even though it's a relatively small bird, a build similar to the chickadee. They are known to frequent bird feeders, and will use their beak as a hammer to smash large seeds open. They prefer to live around eastern woodlands, not venturing past an 2,000 foot elevation. They have an arrow-like flight pattern, and don't normally undulate around. The tufted titmouse has a very loud chirp, and it is frequently heard echoing through the trees.

Common Nighthawk (Chordeiles minor)

Nighthawks are slender, medium-sized birds with long, pointed wings and medium to long tails. Due to their large eyes, short neck, and only having a small tip of their bill visible, they appear to have large heads. They are mottled gray, tan, brown, white, and black with dark wings. They have a white v-shaped streak on their throats and a white streak on their dark wings making them easy to identify.

Around dawn and dusk they can be seen flying in loop patterns while foraging for food, but they remain stationery and motionless during the day making it difficult to spot them. They also never hunt at night. They primarily eat flying insects, especially those that are drawn to lights like moths, flies, beetles, and other insects. They nest on the ground in open areas like forest clearings, sand dunes, and even gravel-topped roofs





Broad Winged Hawk (Buteo platypterus)

The broad winged hawk is a small, stout raptor with pointed wings and a square tail. A broad winged hawk can be identified by the red brown color of their head, thick bands of alternating white and black on the tail and dark brown lines on the underside of their wings that run parallel to the wing length. Younger broad winged hawks often display a lighter brown color and less distinct line formation on the underside of the wings. These birds have been found to date back to nearly 400,000 years ago according to recent Pleistocene fossils found in Virginia, Illinois, Iowa, Florida and Puerto Rico. Today, they can often be found in forests throughout southern Canada and the eastern United States where they nest and hunt on small mammals, amphibians and insects.

Broad winged hawks migrate annually to Central and South America during the winter months. During the migration season, broad winged hawks fly in large groups along mountain ranges and coastlines to their destination. During their flight, populations become concentrated as they near Central America where they can be easily sighted in overwhelming numbers by hawk watchers. Upon migrating the 4,000 mile journey, broad winged hawks often remain in small winter habitat areas about the size of one square mile

American Kestrel (Falco sparverius)

The American Kestrel can be found in New England year round. The American Kestrel is the continent's most common and widespread falcon. Kestrels occupy habitats ranging from deserts and grasslands, to alpine meadows. They are easily seen along telephone wires along roadsides, in open fields, and areas with short vegetation
and few trees. Kestrels eat mostly insects, invertebrates, and small rodents. They commonly eat grasshoppers, cicadas, beetles, spiders, butterflies, and dragonflies. These birds are attracted to many habitats modified by humans, including recreational parks, and pastures. American Kestrels take well to artificial nests boxes. However, Kestrels are naturally nest in cavities. Unable to built their own nesting cavity, Kestrels rely on old woodpecker holes, or natural tree hollows. Kestrels are declining in population, and nest boxes provided by humans help these birds find homes.





Cedar Waxwing (Bombycilla cedrorum)

This extremely high-pitched waxwing is named after the waxy red tips on its secondary wings and its preference for cedar berries in the winter. In addition to the red waxy tips, the black mask and yellow band at the end of the tail make the Cedar Waxwing easy to ID. Cedar Waxwings can be found in compact flocks in open woodlands, streamside willows and alders, and orchards. This bird will typically be seen near fruiting trees and bushes, such as dogwood, serviceberry, cedar, juniper, hawthorn, and winterberry. As it is one of few North American birds that specializes in eating fruit, the Cedar Waxwing can survive for several months on fruit alone.

The female Cedar Waxwing makes all of the decisions and does all of the work for nesting. The female will spend 5 to 6 days building an intricate nest of roots, grasses, and pine needles. The construction of the nest may take more than 2,500 individual trips to the nest. After an 11-13 day incubation period, 2-6 pale blue-gray eggs with black or gray spotting will hatch.

Fortunately, the Cedar Waxwing conservation status is listed as Least Concern and the population size has actually increased in the US.

Canada goose (Branta Canadensis)



This is a prolific bird in the coastal areas of New England. There and in ponds, school yards and golf courses. Their numbers are decreasing with the advent of coyotes as a pinnacle predator. They mate for life and pair off to raise their young in the spring and summer. In winter time they gather together into flocks of birds that can stir water into not freezing on ponds, rivers and estuaries.

It is next to impossible to tell the males from the females unless you have them in hand and can examine their skull bones. Their long necks afford them the opportunity to reach into shallow water bottoms and eat plants and insects

Mallard duck (Anas platyrhynchos)



Abundant in many parts of the world, this medium-sized waterfowl prefers temperate climates near lakes, ponds, and rivers. The female mallard sports brown and black plumage, whereas the male has a vibrant green head with grey wings and belly. The calls of the female are those that are normally associated with the duck, the quack. The male call is a much more coarse and high-pitched whistle. Mallard ducklings hatch after an incubation of 30 days, and are capable of swimming right after hatching. They normally stay with their mother, compelled by filial imprinting, to learn their habitat, how to forage, where to migrate, etc. Mallards are omnivores, whose eating habits change based upon many different factors, including habitat, stage of the breeding cycle, season, and food competition. They normally eat grasses and insects, but also find human food very tasty, and depending on their tolerance for human contact, may be more or less aggressive in trying to get you to share your sandwich.

American Robin (Turdus migratorius)



Boasting a very colorful reddish-orange breast, the American robin is a songbird distributed widely throughout North America. They have a black head and gray wings,They travel in groups, which increases their chances to avoid their main predators; hawks, cats and large snakes. The robin prefers to eat beetles, worms and fruits; they are also a common presence around bird feeders. The term early bird gets the worm fits the robin well. They are one of the first birds to lay eggs during breeding season, and are also the first bird to start singing their songs at dawn. Their song is a very complex series of high-pitched, peep-like chants that they string together in a variety of ways, which they then repeat again and again. They change their song based upon their situation; using different sings during breeding season, to indicate the coming or passing of a storm, and to alert others to the approach of predators.

Blue Jay (Cuanocitta cristata)

All of us know the Blue Jay as, well, a beautiful blue bird; but this field guide is here to educate us all on birds, mammals and other species of animals, like this pretty, little devil. You may be thinking, "that's rude, Blue Jays are beautiful and majestic," but did you know that they are known to be one of the most aggressive bird species not only to other birds, but also humans? Blue Jays are extremely territorial, so when you sight their nest, it is best to just let them be! They are also quite tricky: Blue Jays vocalize with a high pitch shriek, but are also known to mimic predators, such as hawks and humans. This ability may spur from the fact that Blue Jays are actually slow flyers, making them easily susceptible to predator species. Not only can they trick other bird species with their mimicking vocalizations, but they have also tricked us humans, too! You're probably thinking, "What? How has a bird deceived me?" Interestingly, the blue color of their feathers does not come from any sort of pigment, like melanin, but rather from distortion of light. This distortion occurs by the particular structuring of the feathers, allowing the human eye to be deceived into seeing the deep blue color to which we pride a Blue Jay with. Yet, once the structure of the feather itself is distorted, the lavish blue color will disappear.

Blue Jays have also shown us that they are extremely adaptable. Once a bird species known to dwell mostly in mixed woods and forest edges in eastern and central North America, you can now find them in parks, gardens, and even in highly populated urban areas. While they are able to live just about anywhere, Blue Jays will not live with more than one partner, being highly monogamous specie.

The extremely identifiable crest on the top of their heads actually changes to match the Blue Jay's mood; can I hear you say, "Nature's own mood ring?" The crest will sit flat on the Blue Jay's head when it is relaxed (most likely while it is eating or resting). The crest will rise to its highest peak when the Blue Jay feels threatened or excited. Lastly, the crest will ruffle into a brush-like formation when frightened by a predator.

Blue Jays love a variety of food. Their diet is made up 70% plant matter, including fruits, berries, corn, acorns, and nuts, and 30% animal fare, such as insects, other birds' eggs, fish, frogs, and even small mammals! Interestingly, Blue Jays love peanuts, so if you want to increase your chances of sighting these beautiful birds, it is best to fill your bird feeder with a mix of suet, sunflowers and, of course, peanuts! And
while a peanut is a delicious treat for the Blue Jays, they do not like peanut butter because it gets stuck to the roof of their mouths (or should I say beaks)





Great Horned Owl (Bubo virginianus)

Named after the large ear tufts that resemble horns, the Great Horned Owl can be identified by its intense yellow eyes and white throat. The Great Horned Owl is one of the largest owls in the northeast, reaching 22 inches. This nocturnal bird of prey can be found in forests, woodlands, residential areas, and open country. While the Great Horned Owl eats smaller prey, such as rodents and frogs, this fierce predator can also take down larger prey, such as Ospreys and Peregrine Falcons. A force of 28 pounds would be required to open the strong talons of the Great Horned Owl. While their eyes do not move in their sockets, they can swivel their heads more than 180 degrees to look in any direction. Great Horned Owls typically adopt a nest built by another species but they also will use cavities in trees or snags. After 30-37 days of incubation, 1-4 white, spherical eggs will hatch.

Because this species is extremely adaptable to different habitats and prey availability, the Great Horned Owl is listed as Least Concern in conservation status



Common Tern (Sterna hirundo)



The common Tern is a seabird that lives on various continents such as Europe, Asia, and North America. The top half of adult terns are grey with the lower part being a lighter white color. The top part of their head is black, and their feet are orange. These birds live in colonies all year long. Their diet consists of fish in both salt and freshwater, as well as crustaceans, mollusks, and other invertebrate types of prey.

The Common Tern breeds on places including beaches and on islands with little vegetation protection. Up to three eggs can be laid during one season. The eggs are laid to camouflage with the beach where they are laid on. The eggs hatch in about three weeks' time. In some places terns are losing numbers due to habitat loss, pollution, and disturbance of breeding colonies.

Killdare (Charadrius vociferous)

Killdeer are named after their unique and distinctive call – kill-dee, kill-deear - , and should not to be confused with their smaller cousin, Wilson's Plover. These birds are about 9 to 11 inches in height with slim black bills, gray to brown feathers along the top of the head and back, white belly, rusty-orange rump, and 2 black bands across the chest. These birds can be found in grasslands, lawns, shore line, pastures, fields, mudflats, and sandbars.



Killdeer are known for acting as though they are injured to lure predators away from their ground nests. They use their long legs to run along the ground and stop abruptly to check for insects or their surroundings. Although, their feet are not webbed; they are good swimmers

Common loons (Gavia immer):
Common loons are renown for their haunting tremolo, yodels, and wails. Adults are larger than a mallard duck but smaller than a Canada goose. Breeding adults of both sexes have "tuxedo" plumage consisting of a black head, white underbelly, and a grey and white spotted back, vivid red eyes. Nonbreeding adults and juveniles are a dull gray with white underbellies, and dark eyes. They have long bodies and short tails, and in flight, their feet will be visible behind them. Their beaks are like daggers, and they will use them to catch prey and to defend themselves from predators. They are found in freshwater lakes throughout the northern United States and Canada, and can be found along coastlines and in rivers and estuaries during their migration season. Unlike most birds, they have solid bones and not hollow bones. This allows them to dive as deep as 60 meters, submerge with hardly a sound or a splash, and stay underwater for three minutes, at the cost of being unable to take off from land. Loons can mistake parking lots for the water's surface, and many of them are injured or stranded this way. Pollutants in lakes are a problem as well.





Red-throated loon (Gavia stellata)
The Red-Throated Loon grows to be almost two feet in length with a greyish color on the top of its body becoming white on the underside. Only during the breeding season does the loon develop a red patch on its throat. Although fairly common throughout the world the loon is declining in certain areas due to events such as oil spills.
Loons are monogamous or have the same mates every breeding season. Two eggs are laid during each breeding season and are incubated for in-between 3 weeks to a month. If the clutch of eggs is lost because of predation or natural causes then the female will lay another set of eggs. The young are able to move in the water right after hatching. The parents will start feeding the baby small aquatic organisms before moving them onto fish. The parents will distract predators from the offspring by pretending to be injured.

Sharp-shinned hawk (Accipiter stiatus)

The Sharp Shinned Hawk is one of the smallest hawks in North America. Sharp Shins have a distinctive red and white cross hatch pattern on their undersides, and a solid grey back and head. Their eyes are a deep orange color with jet black pupils. The beak is proportionally shorter than most birds of prey, but the wide base and sharp hooked top beak makes provides good leverage for tearing apart prey. The have long skinny legs, with very sharp spindly toes and talons. From a distance they can be identified by their squared off tail feathers, rounded wings, and small stature. Sharp Shinned Hawks are often mistaken for Coopers Hawks, a closely related species, but you can differentiate them because the Coopers have a white tail cap, whereas the Sharp Shin's coloration is solid. Sharp Shinned Hawks are primarily Bird Eaters, favoring the smaller song birds. Due to the wide range of food availability they can be found throughout the woodlands of North America and will often congregate around bird feeders seeking an easy meal. Interestingly the males and females will often target alternating species of prey species as to cut down on the intra-species competition for food





Barred owl (Strix varia)

The Barred Owl is a large owl. They are about 20 inches tall with a wingspan of almost 4 feet. They have a stocky build and are a mottled grayish brown color with brown streaks on their chest and neck. They stand out compared to other owls because they don't have ear tufts
and instead of having yellow eyes like most owls, they have dark eyes. They also have a pale face with a small hooked bill and yellow talons.

These owls live in the woods and are always near bodies of water. They are mostly nocturnal but will hunt during cloudy days. They eat a variety of animals including various rodents, bats, lizards, snakes, amphibians, opossums, and bird including smaller owls. They will also go fishing by wading knee-deep and use their feet to grab crayfish and fish. They typically stay in the same area and are solitary unless mating or taking care of their young. They nest in tree cavities or in the old nests of crows, hawks, and squirrels. Their calls can vary in type from hoots to barking sounds to shrill sounds. Their main predator is the Great Horned Owl

Osprey (Pandion haliaetus)

The Osprey is a large raptor with dark brown or grey wings and a white underbelly. It has piercing yellow eyes and a dark mask spanning across the head. Its talons and beak are shaped for catching fish. This bird of prey feeds almost exclusively on fish, a practice that has earned the osprey it's own taxonomic genus, Pandion. This Sea hawk, as they are affectionately called, can be found worldwide near any large body of fish containing water. Their call is similar to a shrill cheeping noise





American bittern (Botaurus lentiginosus)

The American Bittern belongs to the heron family. It can be found throughout the United States and southern parts of Canada. Thick necked, the bittern is brown in color, and uses its color to easily conceal itself inside bogs, marshes, and wet meadows. If threated, and spotted, the bittern will stand motionless with its beak pointed upright, which allows it to blend into the reeds. They are migratory birds who travel to the southern United States and Central America during the winters. The bittern has a very unique dong which sounds something like a clicking, or hiccupping. The sound is produced through the inflation of the esophagus, which the bittern then releases in short bursts

Roughed grouse (Bonasa umbellus):

The Ruffed Grouse can grow between 16-20 inches and weigh up to 1.5 pounds. They can be grey or brown in color. They spend most of their time on the ground foraging for food. They can be found throughout the northern part of the United States and can be mistaken for other species of birds an example of this is the Prairie Chicken.

The Ruffed Grouse chooses a nest site at the base of a tree, or an area with a lot of ground cover. The nest itself can be six inches across and three inches deep. The nest size for the Ruffed Grouse is between 9 to 14 eggs during one season. The eggs hatch in about three weeks. They are able to move and forage 24 hours after foraging



Mammals

Striped skunk (Mephitis mephitis)

Striped skunks can be found through most of North America. As implied by their name, they have a distinctive white stripe running from the top of their head to the base of their tail straight along their back. They are most famous for their primary defense mechanism, their scent. When they feel threatened or attacked they will excrete a very unpleasant smelling spray from their anal scent glands. This causes almost all predators to avoid them unless there are no other food options available. Two noticeable exceptions to this rule are the great horned owl and red tailed hawk, which have very little sense of smell. Skunks are crepuscular animals, which means they are primarily active at dawn and dusk rather than either during the day or night. They are omnivores, preying on a variety of insects, small amphibians, and small mammals. Male skunks are solitary, and will live by themselves in their dens; however it is quite common for many females to den together





Eastern Cottontail (Sylvilagus floridanus)

Eastern cottontail rabbits are one of the most common rabbit species in North America, and range mostly through the eastern half of the United States. They have a brownish-grey coloration around their head, back and neck, with a lighter color on the underside of their body and tail. They like open grassy clearings, especially old fields filled with green grasses and herbs such as clovers. They are not particularly territorial in that they will not defend their home against other animals, however eastern cottontails do generally pick one home range and live in it for their entire lives, outside of small shifts due to weather changes or any lack of food. It is not an uncommon sight for New England natives to see a small group of baby cottontail rabbits with no mother around. This is not abnormal, nor does it mean the mother has abandoned her babies. Rabbits have high energy requirements, and so the mother has to spend most of the day searching for food. She will come back for only a few short intervals to allow her babies access to milk before returning to foraging

Eastern Grey Squirrel (Sciurus carolinensis)

One of the most well known animals in North America, eastern grey squirrels are native to the United States and Canada. Although they have been introduced to certain regions in the West, and even have some small introduced populations in Europe, they are by far the most common in the eastern half of the United States. They have grey-brown fur with a whitish underside coloration. They eat a wide variety of herbivorous foods, including seeds, nuts, fungi, tree bark, buds, and berries. They do have an interesting means of collecting food for the lean times however. Unlike some animals that will hibernate through the winter, or others that will gather a large supply of food in their dens, squirrels will use a practice known as scatter hoarding. They will make multiple small caches of food in random, hidden locations that they can then access later. These caches can range from temporary spaces that the squirrels will empty out a day after their creation to long-term hidden storage sites that the squirrel will use throughout the winter





Raccoon (Procyon lotor):

Raccoons are native American mammals of unusual intelligence. They are highly adaptable, clever animals. They thrive in cold, rural, semi-rural, suburban and urban habitats. One of the reasons for their success is that they are omnivorous. They can eat almost anything, including worms that they dig up from the ground, fruits and nuts, fish, amphibians, birds, small mammals, small insects, and even human trash. This wide range of potential food sources makes them amazingly capable of adapting to their environment, and there is almost never a time or a place that a raccoon cannot find some kind of food source. They are also interesting because of their powerful sense of touch. They have extremely sensitive front paws, in fact the part of their brain that deals with sensory perception is 66 percent devoted to perceiving and interpreting tactile stimulation. This gives them the distinction of having the most sensitive touch sense that has so far been recorded in the animal kingdom. They are very intelligent, and can logically work through complex puzzles relatively easily. They will also remember the solution to an already solved problem for years at a time.

Raccoons can be found through most of North America, except for the upper regions of Canada.

Red fox (Vulpes vulpes)

The red fox is an interesting animal. It is the largest of the foxes, and is the most widely distributed carnivore in the world. They can be found throughout the entire Northern Hemisphere, and have even been introduced to Australia by human travelers. Although there are many subspecies of red fox, they can all be distinguished by the uniform reddish-orange coloration of their backs, as opposed to other fox species with mixed or different back color patterns. Their diet primarily consists of small rodents, although they will occasionally hunt reptiles, birds, and even some insects. They live in small family groups, mostly consisting of a mating pair and their kits. Humans have included foxes in mythology or thousands of years, generally as cunning tricksters due to their real propensity for troubling farmers by stealing small farm animals like chickens and then disappearing into the night





Grey fox (Urocyon cinereoargenteus)

The grey fox is a small carnivore which ranges mostly from the northern part of South America through the southern half of North America. As their name suggests, this animal can be distinguished from other foxes by the grey coloration of its back and head, although the grey is mixed with red and black. It is one of only two members of the canid family that is capable of climbing trees, with the other being the Asian raccoon dog. This gives the grey fox the unique ability among foxes to make its den in trees, letting them sleep high up in the air. They tend to either live alone or in small groups consisting of two parents and their kits. Their diet is omnivorous, including voles, shrews, birds, insects, fruit, and vegetables. They eat a larger proportion of fruits and vegetables than their close relative, the red fox

Chipmunk (Tamis)

Chipmunk refers to a single genus of the rodent order and consists of 24 distinct species. All of these species live in North America, except for the Siberian chipmunk which can be found in Asia. The most common chipmunk in New England is the Eastern chipmunk, although the species look similar enough to make differentiation difficult. They are omnivores, consuming primarily a mix of seeds, nuts, and fruits while also occasionally partaking of some insects and small reptiles. One interesting difference between the Eastern and Western species of chipmunk in North America is that only the Eastern chipmunk hibernates. The Western varieties rely on stores of food saved in burrows to carry them through the winter



Fisher (Martes pennant)

Fishers are medium sized mammals that are part of the mustelid family, more commonly known as the weasel family. They are carnivorous arboreal animals, meaning they eat primarily meat and spend a large portion of their time in trees. They are usually between 2.5 to 4 feet long from tail tip to nose, although males tend to be roughly a half a foot longer than females on average. Fishers have almost no natural predators, although humans have been trapping them for their fur for hundreds of years and have severely decreased their range in the United States and Canada. They are now primarily found along a narrow geographic strip spanning some of Northern United States and most of Southern Canada. Their most common prey items are porcupines and snowshoe hares, although they can and will hunt most small animals that venture within their range







Coyote (Canis latrans)

The eastern coyote is a rarely seen but fairly common part of most suburban environments in the eastern parts of North America. Although they are closely related to grey wolves, coyotes are very different animals. Grey wolves never mixed well with humans, and it is only through federal regulations and intensive ecological work that they still have a significant presence in the United States at all. Coyotes on the other hand have thrived since humans arrived on the scene; expanding in population and range entirely without our assistance. This difference can largely be attributed to the fact that coyotes have the ability to eat almost anything to stay alive, as well as the fact that they feel comfortable in suburban and even sometimes metropolitan environments. This makes them extremely adaptable and more efficient survivors than wolves.

This varied diet makes them very efficient omnivores. They will eat standard small animal prey, but will also scavenge carcasses and eat fruits, nuts, and seeds if necessary. Most coyotes will either live alone, in a pair, or in a small pack of three to eight animals depending on whether it is mating season or not and on their personal preferences. They are extremely fast animals, reaching a maximum speed of around 43 MPH that makes them one of the fastest land animals in North America

Groundhog (Marmota monax)

The groundhog, also known as woodchucks, whistle-pigs, or land-beavers are common amongst the lowlands. You can find groundhogs throughout North America from the northeast and central United States all the way to Alaska and as far southeast as Georgia. Weighing in at roughly 2 to 4 kg (4-9 lbs) groundhogs are part of a group of large ground squirrels known as marmots. The groundhog boasts two coats of fur; a dense undercoat and a coat of guard hair which, along with its short stubby tail, give the groundhog its distinctive appearance. Well adapted for digging, these marmots have short but powerful limbs with tough, sharp claws.

Groundhogs dig burrows which can include up to 14 meters of tunnels and are one of few species that enters a true hibernation during the winter season. The groundhog is also celebrated in February during Groundhog Day. According to folklore, if it is cloudy as a groundhog emerges from its burrow, then spring will come early; If it is sunny, the groundhog will see its shadow and retreat into its burrow, and winter weather will continue for another six week**s**



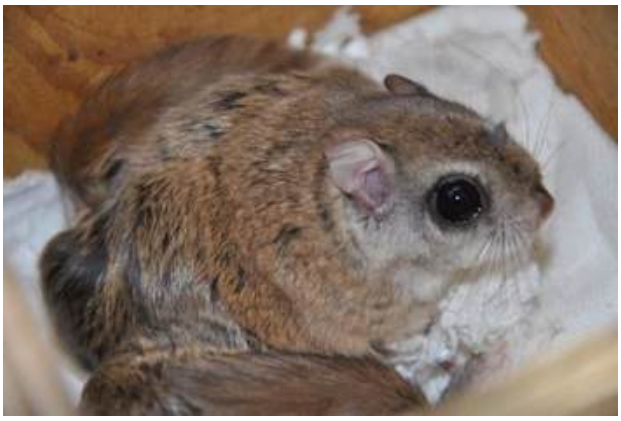


Virginia Opossum (Didelphis virginiana)

The Virginia Opossum is a very successful omnivore found throughout the eastern and central United States and Mexico. Although successful, they have a relatively short lifespan of around 2 years in the wild. The Opossum is a nocturnal animal with a white face, and a dull grayish brown coat. Their sizes vary greatly, with the males ranging from 1.7 to 14 pounds, and females ranging from 11 ounces to around 8 pounds.

They have 50 teeth, more than any North American mammal. Opossums are known to climb trees, and frequently use its opposable, clawless thumbs and long, hairless tail for grabbing branches and other small objects. Opossums are the only marsupial found in North America north of Mexico; marsupials have the distinctive characteristic of carrying their young in a pouch. They are also known for their reaction to threats, triggered through extreme fear, by feigning death, which has given rise to the term “playing possum”

Northern Flying Squirrel (Glaucomys sabrinus):
The Northern flying squirrel can be found in the uppermost regions of northeastern and western United States. Strictly nocturnal creatures, these small rodents can be found in coniferous and mixed forests atop the trees. Northern flying squirrels have a light brown top coat
and are gray/white underneath. Contrary to what their names suggest, flying squirrels cannot actually fly and instead make use of stretchy skin, known as a patagium, on the sides of their bodies to assist them in gliding. They glide by getting a running start, then retract their head and form an "X" with their limbs, which form the wings used in gliding. They are very maneuverable in the air, and can make 90 degree turns around obstacles if needed. To land, they use their tail to change their trajectory upwards which creates a parachute effect as they approach their destination. The funny thing about them is that while graceful in the air, they are very clumsy walkers and prefer to hide from danger rather than run away





Porcupine (Hystricomorph Hystricidae)
Porcupines belong to the order of rodents, and are found in the Americas, Southern Asia, Europe and Africa. Most porcupines weight 12 – 35 pounds and are round, and slow moving. Porcupines are colored in different shades of brown, gray and white. They are best known for their distinctive coat of sharp spines, or quills, that are embedded in the porcupine's skin musculature. The quills are modified hairs covered by plates of thick keratin, which are the structural material used to make human skin, hair and nails. They are released through contact with predators, and new quills will grow to replace old ones. The ends of the quills contain backwards facing barbs which will embed themselves in the would-be attacker and remain in place. Porcupines' spines make them closely resemble the unrelated hedgehog in appearance. The North American porcupines are generally nocturnal and often climb trees to find food; as herbivores, their diet consists of leaves, herbs, twigs and green plants like clover

Muskrat (Ondatra zibethicus)

Native to North America, the muskrat is found in wetlands over a variety of climates and habitats in most of Canada and the United States, but have also been introduced to parts of Europe, Asia and South America. Muskrats weigh from 1.3 – 4.5 pounds and are omnivores who commonly forage for food. They have two coats of short, thick fur to protect them from the cold waters, with a color scheme ranging from medium to dark brown or black. They have scales on their tails and semi-webbed hind feet that assist with swimming, which is useful for their semiaquatic lifestyle. Muskrats can hold their breath underwater for around 15 minutes, and can close their ears to keep water out. They create push-ups out of vegetation and mud which have underwater entrances are used as a home for a male and female muskrat and their young. Muskrats are very territorial and will fight with other muskrats for territory and potential mates. The trapping of muskrats for their warm fur was a large industry in the 20th century, and even today the Royal Canadian Mounted Police winter hats are made from muskrat fur





White-Tailed Deer (Odocoileus virginianus)

White-tailed deer are native to North America and have also been introduced to a few countries in Europe. The deer has a reddish-brown coat during the spring and summer months that muddles down to a grey-brown color during the fall and winter, it is easy to recognize a white-tailed deer by its white underside and tail. Male deer, known as bucks, average 150 pounds in size, whereas the female, known as does, average 100 pounds. The deer eat a large variety of foods that is very dependent on their geological location, but most eat shoots, leaves, cacti and grasses.

Males compete for breeding females, who spar to determine dominance. They will then enter something known as the rut, where they copulate with as many females as possible; they rarely eat or rest during the rut. The fawns, or baby deer, that are born are easily recognizable by white spots on their fur, which disappear as they reach maturity. An interesting fact about deer is that they can only see in two-color vision, with blue and yellow primaries, which means they cannot distinguish well between orange and red colors. This is the reason orange is used as a safety color on hunting clothing

Enjoy exploring our trails and come visit again soon!

