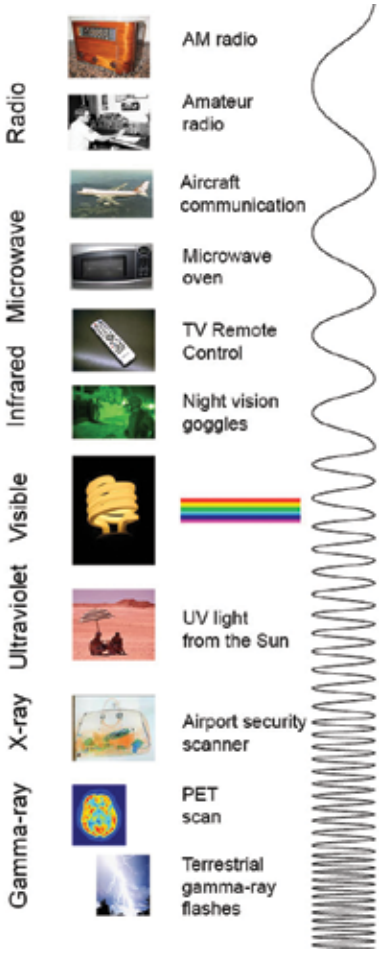
SUMMIT VIEW

The Newsletter of the Friends of Mt. Agamenticus Spring 2025

SUNLIGHT SPEAKS

"...if the Sun's Light consisted of but one sort of Rays, there would be but one Colour in the whole World..."
– Sir Isaac Newton, Opticks 1704

Light energy comes from electromagnetic radiation that is emitted by the Sun and contains gamma rays, x-rays, ultraviolet light, visible light, infrared light, microwaves, and radio waves. In this vast spectrum of energy, humans can only see "visible light." Birds, insects, fish, reptiles, and amphibians are able to see visible, plus ultraviolet, light. We can only see things because of the phenomenon of visible light reflecting off an object to our eyes. The color of anything is due to light energy from the object traveling, or more precisely, refracting from, the object to our eyes. Colors of all shades of the rainbow are the delight and constant companions of humans as much as the sight and sounds of birds who endow our existence with beauty and fascination. But how and why do we see color? In 1666, Isaac Newton performed an experiment that changed the human understanding of light using prisms. He solved the "puzzle of the rainbow" by showing that clear white light was composed of seven visible colors. The colors we see in bird feathers have a lot to do with the wavelengths of the visible spectrum. All feathers are made of keratin, a durable protein and the same substance found in human fingernails and hair, but the color is created in two ways: they are either pigments in the feather or light refracted by the structure of the feather – sometimes both. Some birds consume a diet rich in carotenoids like berries, fruits, or carotenoid-rich seeds, flowers and insects; some, like the Flamingo, eat algae and particularly, brine shrimp, to get those signature pink feathers. Without that special diet, their feathers would appear gray. (Incidentally, if a human ate about 10 carrots a day for several weeks the skin can become tinged orange from the carotenoids.) Pigments are found in both plants and animals, but in bird feathers they come from carotenoids, melanins, and porphyrines. Melanins produce the darkest black to reddish browns and pale yellows and give feathers strength and resistance to wear. Feathers without any pigmentation are the weakest of all, though many all-white birds have black feathers on the wings and wing tips. When porphyrines are exposed to UV light, they fluoresce and produce pink, browns, reds, and greens. Enter the Eastern Bluebird, Blue Jays, Blue Grosbeak, Indigo Bunting and many other birds whose feathers appear blue. Their blue color is not derived from eating blue berries containing anthocyanins (which produce the red, blue, purple pigments in plants). Those pigments are destroyed when birds ingest them. Elsewhere in nature, blue pigment is very rare. There is no blue pigment in blue feathered birds. The blue color we see comes from the microscopic structure of feathers that refract or scatter only



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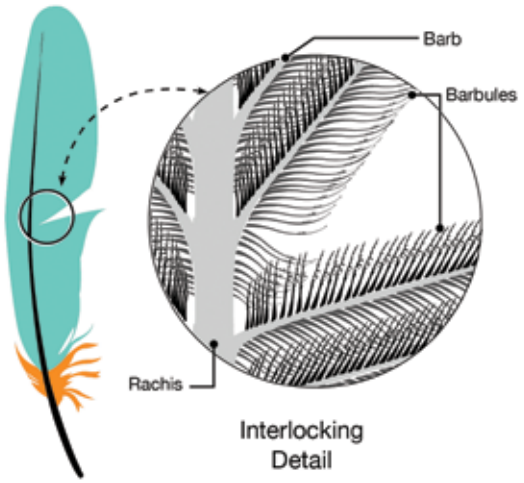
the blue wavelengths of visible light. The other visible colors of the spectrum are absorbed and we don't see them. For example, the striking color of the Northern Cardinal, the longer red wavelengths are refracted back to our eyes; Goldfinches, Warblers, the yellow; Orioles, the orange; Parrots, green, etc. Iridescence! Irresistibly beautiful, mesmerizing prismatic colors found in many birds including those dazzling works of wonder, Hummingbirds, become visible as the viewing angle changes. Many species of birds have feathers that flash iridescent colors. Grackles appear black from a distance, but shimmer with shades of blue, green, and purple in sunlight, especially on the head. It's worth a closer look at European Starlings, especially the males, to find the effect; also, the Tri-colored heron, Purple martins, Peacocks, Rock pigeons, Swallows, Mallards, Wood ducks, and many waterfowl. This outstanding masterwork of precise nanostructures in feather engineering and color is usually the gift bestowed upon the male of the bird species. The theory is that a brilliant display attracts potential females; that fine, flashy feathers show a male to be well-fed, in good health, and with good genes to pass on to offspring, but all this shimmering to attract a mate comes with drawbacks. Appearing to be a "hot prospect" to females, iridescent feathers heat up faster than pigmented ones. They also resist water less efficiently, not to mention making it more difficult to hide from predators. Birds have indeed perfected the art of color through billions of years of evolution, but is there more to it than practical reasons to secure a mate? What if birds have grown a sense of sublimity, beauty - art? Some with a lifetime of study of ornithology see it differently, as does Richard Prum of Yale University who writes: ". . .sexual choices in birds and other animals stem mostly from a preference for the 'merely beautiful.' Every time you find co-evolution between advertisement or expression and evaluation, then I propose that you have art. And that means that flowers are art, most of them; and that birdsong is art; and lots of aspects of bird plumage are art. . ."



Hummingbird by Harry Kemp
The sunlight speaks. And it's voice is a bird: It glitters half-guessed half seen half-heard Above the flower bed. Over the lawn ... A flashing dip and it is gone. And all it lends to the eye is this - A sunbeam giving the air a kiss. –

Exactly.

What is Nature?

"There's this idea of nature—that we have to leave, and go someplace to find it -- it's everywhere…" (excerpt of quote from actor/activist Shailene Woodley).

From the Periodic Table of the Elements to the bread on the dinner table, everything in our world, including the basic needs to sustain life as we know it, originate from nature. Sure, humans have acquired, altered and activated materials from nature over the centuries to meet our demands and needs -- the U.S. Energy Information Administration states the following in its Maine profile:

In Maine, rivers that flow from the state's interior highlands to the sea provide hydroelectricity resources, while winds that sweep along the coast and across Maine's uplands and the mountain crests of its Appalachian ranges make the state New England's leader in wind-powered electricity generation.

Forests cover about nine-tenths of Maine, the largest share of any state, and forest products are both a major energy-intensive industry and an important biomass resource, powering electricity generation and supplying wood-derived fuels. Although Maine is home to several coastal cities, it is the least densely populated state east of the Mississippi River.

Even in the heart of our cities and towns, nature can be found – not only in preserved greenspaces, but also in cracks, crevices and cornices that are often overlooked. Next time you are walking down the street, take a closer view at your surroundings – you may see some familiar plants, animals, insects and birds surviving and even thriving in the least likely places.

Or just step outside to explore your own backyard, visit a local park (including Mount Agamenticus Conservation Region), buy food and other products from the region's farmers/growers or participate in the numerous outdoor recreational opportunities enabled by our state's varied topography and resources from nature.

Resources: Article about actor/activist/Conservation International Board Member Shailene Woodley, https://www.outsideonline.com/outdoor-adventure/environment/shailene-woodley-environmentalist/; Maine profile U.S. Energy Information Admin., https://www.eia.gov/state/analysis.php?sid=ME#3; Tree of Facts about our state from Maine.gov, https://www.maine.gov/sos/kids/about/treefacts

Spring Ephemeral Flower – *David Tibbetts*

Ephemeral is Latin for "lasting a very short time." Many of these spring flowers can be found on the forest floor where they take advantage of the abundant sunlight in the early spring before any canopy trees develop leaves. One of my favorite ephemerals is the Painted Trillium (Trillium undulatum). This Trillium gets its name from the structures of three (Tri), three whorled leaves, three petals, three sepals (leaf-like structure just behind the petals) and a three-celled ovary. The species name, undulatum, refers to the wavy edges of the petals. In early spring, the race is on for these plants to develop leaves that act like solar panels to gather energy from the sun, bloom, attract pollinating flies, and grow mature fruit before going dormant in late spring. The seeds have an oily sticky attachment (elaiosome) that attracts ants. The ants will carry the seeds back to their nest and when they have eaten the elaiosome, the seeds are deposited in their compost piles where they can germinate in a nutrient-rich environment. Trilliums can take up to 10 years to develop before their first flowers appear.

Shop The Fabulous Find in May & Support Friends of Mt. A!

The Fabulous Find Boutique & Resale Store in Kittery has chosen Friends of Mt. A as one of three recipients for May 2025. All profits are donated to the organizations selected by The Fabulous Find board for that particular month — the more sales they do, the bigger the donations to the organizations will be at the end of the month! The Fabulous Find, a 501c3 non-profit organization (listed under A Caring Community), is a beautifully merchandised boutique style resale shop at 139 State Rd. (Route One) in Kittery which partners with different worthy, local non-profit organizations each month. The Fabulous Find opened in mid-July of 2010 and, with tremendous support from the community, in 14 years they have given out over 3 million dollars to more than 150 local non-profits. Amazing! Please ask your family, friends and neighbors to support the Friends of Mt. A and the other charities chosen by The Fabulous Find for May by donating their nicer items and/or by shopping the store ~ http://www.thefabulousfind.org/.

Mount Agamenticus - My Bonsai Mountain

– Mike Modern

I frequently refer to Mount Agamenticus (Mt. A) as my, or our, Bonsai Mountain. If asked why, I usually respond by pointing out it has all the characteristics of our bigger New England mountains, but on a smaller scale.

At Mt. A, one can find smooth easy trails, steep rugged trails, open vistas looking out to sea or north to Agiocochook,* open rock ledges, at least one steep vertical outcropping and a northwest facing region that holds snow and ice well into spring when the southeast sections are clear, warming and starting to show signs of spring growth.

The literal translation of Bonsai is "planted in a basin" and for the most part the mountain is a creation of natural processes, not an intentional planting. Yet, just as the Bonsai tree is shaped by human care, some characteristics of Mt. A are also shaped by its human inhabitants – trees were harvested for various purposes - firewood, buildings, masts, charcoal and to pasture sheep.

More recently, the military used it as an observation area, then it became a short-lived ski area (the Big A) which kept the summit open and created wider trails than those from earlier hunters and travelers. Now, the Mount Agamenticus Conservation Region is maintained to protect our freshwater supply, sustain a fish and game region and for recreational use.

Beyond the literal translation, the Bonsai tree is associated with harmony, inner peace, balance and positivity. At least one writer (Mariya Kanegi) has stated the Golden Rule of Bonsai is, "patience and observation." All of these are encountered as I ponder past experiences or wander through, around and over the mountain.

So, may you also be a patient observer as you travel our Bonsai Mountain and enjoy harmony, inner peace, balance and positivity.

* The mountain in New Hampshire now known as Mount Washington, from a Native American word loosely translating to "Home of the Great Spirit," https://blog.nhstateparks.org/home-of-great-spirit/; the Mount Agamenticus Conservation Region is located in the traditional territory of the Wabanaki Confederacy; for more information, please see Land Acknowledgement at https://agamenticus.org/community-conservation/our-work.

Amy Brubaker: https://brubirds.format.com/

Broad-winged Hawk

Today I heard the Broad-winged hawk's cry –
kee-ee, kee-ee – wheeling high up in the sky
the spirited little raptor adept at such a height
returning home after its arduous flight.

It wasn't the faces of the daffodils
or the return of the Pine warbler's trills,
nor the intricate red flowers of the maple tree
that settled the anxious rush of the season in me.

It was the sight of this circling raptor having hundreds of miles traveled
that untied an aching heart and earthly cares unraveled
like a kite from its tether freed and launched into airy skies
most like, I deign to believe, where wide open eternity lies –
kee-ee, kee-ee!

– Denise Johnson

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