

Second Nature

Spring Shifts & Vernal Journals

By Sarah Tsalbins

The vernal equinox falls on March 20th this year, marking the beginning of spring. On this day the poles of our earth are not tipped toward or away from the sun, and day and night are of equal length. If you're able to, consider getting outside with your family on the equinox, or some day close to it. In what ways does it still feel like winter outside? What signs of spring do you notice? What are the temperature and weather patterns like? What plants are emerging? How are the trees changing? What animals are active? Do you notice behavioral changes among the humans or pets in your family as spring takes hold? The equinox can be a wonderful moment to reflect on how we got through the challenges winter brought, and to take stock of new growth unfurling within and around us.

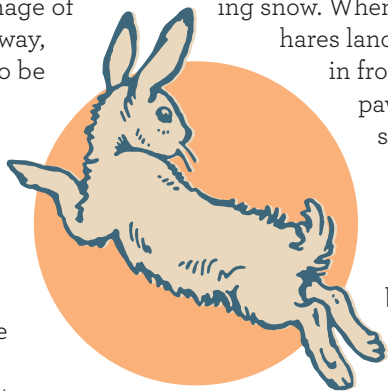
For some, the thought of spring goes 'hand-in-paw' with the image of the Easter bunny. Either way, spring is a fun moment to be on the lookout for rabbit runs and run-ins. If you and your family have the opportunity to explore a coniferous forest or swampy area near your home, keep an eye out for signs of active snowshoe hares.

If there is farmland, pasture, brush habitat or woods accessible

to wander, you might see an eastern cottontail rabbit. This year, rather than just searching out eggs on Easter, why not go on an Easter bunny quest?! Even if you don't catch sight of an actual rabbit or hare, you might see some of its telltale signs if you're in the right habitat... (and if you do get a chance to see the actual animal, please respect its space and definitely don't harass it about Easter eggs).

Lagomorphs, the taxonomic order to which hares and rabbits belong, have sharp incisors on the top and bottom of their mouths, so as they browse they'll leave branches cut neatly at a 45 degree angle (deer have only bottom incisors so they tear at branches, leaving messy ends). In winter and early spring rabbits will eat the twigs and buds of fruit trees.

Porcupines will also munch on apple trees in this way, though they are less likely to debark these trees like rabbits will do. Also be on the lookout for little round scat, and for tracks in the mud or lingering snow. When they hop rabbits and hares land with their big rear paws in front of their smaller front paws. Many people mistake squirrel tracks for rabbit tracks. A way to distinguish these prints is by noticing the placement of the smaller front feet; rabbits and hares generally land with one in front of the other while squirrels land with their front feet side by side.



While often confused, eastern cottontail rabbits and snowshoe hares are actually entirely different species. Cottontail babies are altricial, meaning they are born naked and blind, whereas snowshoe hare young are precocial, meaning they are born with open eyes and a layer of hair. While both are fast hoppers, the hare's large hind legs and feet offer a special advantage in rapidly traversing deep snows. With toes spread wide its 'snowshoe' feet keep it from sinking into the snow as it makes a mad dash away from one of its many preda-

tors; sometimes even hopping 12 feet in a single bound.

If you're lucky enough to see an early spring snowshoe hare, take note of its coloration. In spring, this species transitions from the seasonal camouflage of a white winter coat to the rusty brown fur that will help it to blend in with the hues of spring, summer and autumn. While a white coat has historically been an asset to this species, in an increasingly snow-starved climate it could become a liability. In the face of climate change, species must either adapt, or else migrate to more suitable



ly-furrowed, old ash. Later, sit together with your nature journal.

Younger children can draw their observations or dictate what they noticed and would like you to record. Older children may do the writing themselves. Consider recording observations such as time, date, weather, and what the plants, animals, fungi and/or humans you encountered were getting up to. (Note: Don't forget to check for ticks while you are out exploring and do a full body tick check when you get home).

Whether it's a trillium blooming, the song of a migratory red-wing blackbird returning to its local breeding range, the maple leaves emerging from swollen buds, or the sight of a new bird's nest being constructed beneath the eaves of the grocery store, it's exciting to attune to the activity of spring, and it connects us to our environment on a deeper level. When we pay attention to them, these moments can become pleasantly entwined with other memories and milestones, as much a part of the way we track familial time as a lost tooth, a school performance, or a birthday celebration. In addition, tracking our observations from year to year and noting similarities and differences can be a way of participating in scientific inquiry.

Consider getting involved in community science together. This term, also known as citizen science, refers to scientific research undertaken by the public, and you can contribute your observations! eBird and iNaturalist enable you to report and photograph wildlife sightings, and to explore a host of information and observations from other members of your community as well as trained scientists. The Mountain Rain or Snow project and Community Collaborative Rain Hail and Snow Network are a good option for those interested in tracking weather. Southeastern Vermont Watershed Alliance and the Vermont

Vernal Pool Atlas are good options for waterway wanderers to check out. You could also consider joining a Salamander Crossing Brigade with BEEC. In this capacity, you'll help us track amphibian data while offering a potentially

life-saving lift across road crossings as they make their spring pilgrimage from the forest to the wetland habitats where they'll convene and breed.

In some states community science has also been used by people battling big polluters. Pollution and other environmental hazards — including those related to climate change — disproportionately impact Black, Asian, Latinx and Indigenous communities and lower income people in our country. Especially as Earth Day approaches, older children might be curious to learn about projects like the Louisiana Bucket Brigade and its iWitness Pollution Map which helps locals report instances of pollution and hold polluters accountable.

Try engaging the teens and tweens in your life in conversation about when and where they encounter pollution and climate change in their own communities. What do they know about how other communities around the country and around the world, very different from their own, are experiencing these phenomena? What do they understand about the roots of climate change? And what do they see being done down the block, through the woods or across the world to address climate change and work to build a healthier future for planet and people? If they are passionate about these issues, you might suggest joining or starting a school club, or getting involved with a group like Youth Lobby Vermont or 350NH Youth Organizing Program.

Whether it's connecting with the youth climate justice movement or community science, starting a family nature journal, tracking the Easter bunny, or just deeply observing subtle natural shifts, let spring for your family be a time of reinvigorated curiosity and purposeful action.

Second Nature is submitted by the naturalists at Bonnyvale Environmental Education Center in West Brattleboro. Come enjoy the trails open sunrise to sunset. Join us at Nature Explorers camps and programs for ages 5 through 15 this spring and summer. Visit www.BEEC.org for more information and current events for all ages. BEEC is a member supported non-profit organization.



conditions elsewhere. Thus far, scientists have shown that snowshoe hares do not have the ability to change their coats to match snow cover (or lack of) in their surroundings. This will have impacts on their survival, if predictions of later snow arrival and earlier snow melt hold up and they remain unable to adjust their coats accordingly.

Through careful monitoring and observation of ecosystems, scientists are learning more about how climate change is impacting the biodiversity of our region. But you needn't be a trained professional to study the shifts in

your environment. Consider involving children in keeping a spring (or year-round!) nature journal. When you go for a walk around the block, see birds outside your window or take a hike in the forest, encourage your young learner to share details of what they notice. Model relating your own observations

aloud and ask questions that help draw out children's attention to details. Guide full sensory observation by inquiring about smells, sounds, sights and feel. You might sniff the bud of a young beech tree and feel how the tree's smooth bark is different from that of a deep-

