

DIGGING IN

NOVA SCOTIA HORTICULTURE FOR HEALTH NETWORK

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The Nova Scotia Horticulture for Health Network is a coalition of people interested in supporting horticulture for health initiatives through resource-sharing, exchange of practices/knowledge, and networking.



Harvest Hootenanny at Common Roots Urban Farm Builds Community

By Lesley Fleming, HTR

Photos by Common Roots Urban Farm

The farm was a true celebration of community. Harvest Hootenanny at Common Roots Urban Farm Bi-Hi in November was a smashing success as were the smashed pumpkins, pressing the cider, planting garlic, pickling of veggies and so much more. This annual event builds a sense of community and strengthens community connections with its inclusive welcome to one and all.

Several stations were set up with hands-on activities. The feast which was coordinated by the newcomer program participants fed the soul and stomachs of people of all ages. Music by Sloecooker made the hootenanny celebratory. Prizes donated by local businesses set a generous tone, and ongoing support from Metroworks and Stone Hearth continue to provide a sense of stability for the urban farm.

CONTENTS

1 Harvest Hootenanny at Common Roots Urban Farm Builds Community

4 Embracing Nature: Tips for Establishing a Wildlife Garden in Winter

6 Nova Scotia's Buy-Local Movement

7 Farmers' Markets Reflect Sense of Place

9 Active & Passive Engagement with Plants: Incorporating Interoception, Proprioception & Vestibular Senses for Therapeutic Outcomes

12 Case Example: Using Sensory Experiences to Improve Self-Regulation

13 Winter Resources

Photo top right: K. Carroll

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NSHHortNetwork@gmail.com



Embracing Nature: Tips for Establishing a Wildlife Garden in Winter

Text & photos by Tim Mason

Winter is the season we spend the least time in our gardens, though our landscapes are never truly 'put to bed'. Inside shrubbery, underneath leaf piles, or beneath blankets of snow, life continues on as our wildlife friends eke out an existence until Spring arrives. The three elements of food, shelter, and water are equally important through the fallow months to ensure their livelihood.

Creating a wildlife garden in a space you can view from a nearby window will allow you to witness these cycles of nature from a safe, warm, and dry distance. Here are some simple tips in successfully creating and maintaining your Winter wildlife garden.

Shelter

- **Change your view**

Imagine yourself as the wildlife you are looking to welcome into your garden. Where would you like to overwinter? What aspects of the landscape would you find attractive, or repellent? Picturing yourself as your wildlife neighbours will provide new perspectives for your garden design, while providing an effective practice in mindfulness and empathy.

- **There's levels to it**

Many insects overwinter in fallen leaves, sticks, stones, and brush. Smaller birds seek the comfort of shrubs, while larger birds perch high to survey their territory. With this in mind - there are opportunities at every level to provide places of rest or shelter. Using a variety of heights and locations will encourage a diverse range of wildlife to access your garden.

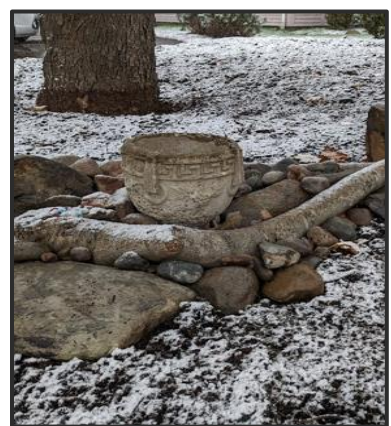
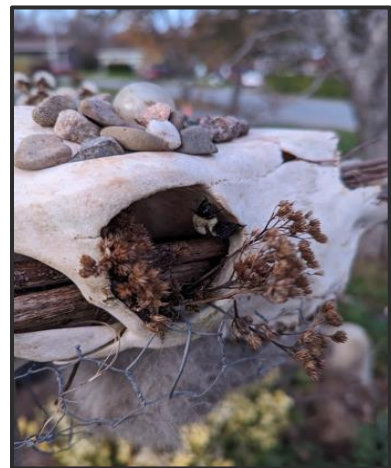
- **Piles of piles**

Creating pollinator and bug-friendly habitats can be artistically complex or stunningly rudimentary - as long as the basic principles of shelter are present, the appreciative tenants will utilize these environments. Piles of leaves, logs, and stones are a perfect and simple way to create these spaces.

Food & Water

- **Water**

Despite snowfall, water can be a scarce resource throughout the Winter. This leads birds to risk exposure and expend excess energy seeking out locations to drink and bathe. A heated birdbath is an excellent investment for your wildlife



garden. It will attract a diverse range of wildlife to your space and could be the difference between life or death for several species.

- **Park the pruners**

During the colder months the caloric intake required by birds increases as food sources diminish. Leaving grasses and spent flowers will provide a visual winter interest in the garden, while the remnants of seeds contained within provide birds with the necessary nutrients to survive.

- **Supplemental seed & suet**

Providing high energy food sources through Winter is a huge boost to local bird populations and ensures your garden will be a hive of activity all season long. Consistency is key - regular feeding times and maintaining your feeders offer safety and stability throughout the uncertainty of the harshest time of year.

Plants



- **Northern Bayberry** (*Myrica pensylvanica*)

This native species is known for being particularly hardy, tolerating urban pollution and controlling erosion - often used on shorelines. Berries appear on the branches in August and persist through Winter, feeding small birds and mammals until the following spring. Top left.

- **Eastern White Pine** (*Pinus strobus*)

One of the tallest and most valuable trees in eastern North America, this native evergreen ranks highly in terms of wildlife importance. Various parts of the Eastern White Pine are consumed by a wide range of wildlife - from black bears & red squirrels to warblers & butterflies. Their large size and long branches provide a perfect habitat for several species of birds while their fallen needles are a favourite of butterfly & moth larva. Top middle photo.

- **Little Bluestem** (*Schizachyrium scoparium*)

Well-known for its visual appeal and year-round interest, it is an excellent choice for wildlife gardens. The white seed heads of this drought-tolerant prairie grass allow small birds to subsist through the colder months when food is scarce. A North American native, it is a larval host plant for several moths and butterflies - and resistant to grazing by deer. Top right photo.

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This Winter, take the time to sit and watch how your garden shifts through the season. Build wildlife spaces you can easily view from inside - the beauty of nature visiting your creation will provide hours of enjoyment. The keen eye will see subtle changes in the weather, and soon begin to notice the heralds of Spring approaching. Observe how nature interacts and grows with your space - remember 'If nothing is living in your garden, then your garden is not living!'

Resources

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Tim Mason is a nature-based gardener living in Halifax, Nova Scotia. Originally from Australia, Tim grew up with a deep love for nature which influences his garden design and creation, notably 'Wildlife Windows'.



Photo: Clever Visuals.Unsplash

Nova Scotia's Buy-Local Movement

Text by Lesley Fleming, HTR

Graphics by Farmers' Markets of Nova Scotia

Several initiatives are focused on promoting Nova Scotia's Buy-Local Movement. Farmers' Markets of Nova Scotia not-for-profit cooperative promotes buy local through its 40 affiliated markets. Its *Buy Local NS* is a consumer awareness program for Nova Scotian products. With a directory for fresh agri-food, seafood and beverage products, many of which are plant-based, the campaign is intended to promote products, the economy and local efforts through retail, food service, partnerships and tourism. Products include berries, seeds, apples, apple cider, coffee and tea, fruit, herbs, spices and seasonings, vegetables, preserves, and nuts among other products.

The *Nova Scotia Loyal Program* created by the provincial government is an economic initiative to incentivize more people to buy local. It champions

the significance of supporting local businesses and producers, and a commitment to fostering community sustainability and economic growth. Buying local is an investment in the community with jobs, boost to local taxes, public services for neighbors and fellow community members while reducing carbon footprint and promoting highest-quality products with a conscientious choice. The concept and practice of buying local preserves the heritage and culture of the region, known for its crafts, methods and recipes passed down through generations. The ripple effect beyond the point of sale encourages entrepreneurship, innovation, fostering a vibrant local economy (Bosse, 2023).



Buylocal.novascotia.ca. (2023). Buy local NS (directory). <https://buylocal.novascotia.ca/>

The Kilted Chef Alain Bosse. (2023). Embracing local: The Nova Scotia Loyal Program and

the power of buying local. <https://kiltedchef.ca/the-nova-scotia-loyal-program-and-the-power-of-buying-local/>

Farmers' Markets Reflect Sense of Place

Text & photos by Lesley Fleming, HTR

Sense of place—the attachments and connections between people and places—is one way to describe the essence of farmers' markets. They are places where people gather to exchange and purchase (mostly) fresh produce where social interactions underscore these connections. The Farmers' Markets of Nova Scotia and its 40 members across the province work to strengthen communities through cooperative growth and prosperity for the economy and food security, with core values of economic development, advocacy, education and food access (n.d.a).

One such example of this sense of place is the [Halifax Seaport Farmers' Market](#). Founded in 1750 by Royal Proclamation, it is the oldest continuously operating farmers' market in North America (Farmers' Market of NS, n.d.a). Its success and longevity are based on its ability to connect people and places and to provide items desired by people in the local area. Originally located where the present day Bank of Montreal building is, the market has operated in several locations, moving to the Halifax Seaport in 2010 and in July 2023 to Pavilion 23, in the west end of the former Cunard Center.

The producers/growers/vendors at the Halifax Seaport Farmers' Market have diverse products, personalities, and backgrounds. They share local roots, use local ingredients and reflect local tastes, culture and traditions, some newer, some longstanding. Their variety of products include fresh produce, fruit, fish, prepared foods, wine/bee/spirits, baked goods, artisanal woodwork and leatherwork products. The Nova Scotian sense of place is infused through flavor, plants, handiwork, and bluenose attitude. This farmers' market, like others in the province, benefits and supports a wide-ranging mix of businesses, people, experiences, and products. For example:



[South Shore Sea Salt](#) based in Hubbards NS creates hand-crafted gourmet cooking salts selling through wholesale programs, online and retail outlets including farmers' market locations.

[Chill Street Fresh Beer and Cider Market](#) brews fresh beer and cider in Elmsdale, NS with flavors like Vanilla Mint Irish Cider, Mistletoe Plum Cider, Iced Coffee and Chill St. beer.

[East Coast Family Market – Blois Family Farm](#) produces organic produce, pesto, jams and meat at their Nine Mile River farm, NS selling at several area farmers' markets.



[Earth Elementals Soap](#) nature-inspired body care products from the locally owned business grow (some of) their ingredients in their Hammonds Plains, NS location.

[Oxford Asparagus Farm](#) at Black River NS began with George Dorn planting Viking KB3 asparagus cultivars started from seed, still producing healthy tasty asparagus today.

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Naturally Wood vendors Rodney and Ida make individual items like bowls and cutting boards from solid wood using only natural colors/no dyes from their Kings, NS location. Photo: Naturally Wood

Deek's Spice Blends rooted in Halifax, NS has developed flavors like Shawarma and Spicy Fries selling their products on a variety of platforms – online, through the Village Emporium in Chester NS and at several farmers' markets.

Halifax Honey Company sources nectars from a variety of wildflowers across NS making small batches (Stingin' Hot Honey for example) with minimal ingredients, focusing on raw unpasteurized Canadian honey and the natural nutritional value of ingredients.



River View Herbs specializes in fresh cut culinary herbs with more than 150 varieties of herb plants grown in NS. Grow local!

Many other vendors at the Halifax Seaport Farmers' Market reflect the sense of place—Haligonian and Nova Scotian. Not only the terroir soil and environmental factors that affect crop phenotype, and the type of produce characteristic to Nova Scotia farms—carrots, broccoli, apples, grapes and blueberries—it is also the care and attention producers and growers use in growing fruits and vegetables.



The Halifax Seaport Farmers' Market has expanded with more than 250 vendors. The market is fully wheelchair accessible. All of these reasons explain why the market attracts locals and visitors alike with “anything you can make, bake, grow or catch”. It is a great place to experience the interplay between plants, plant-based products and human interactions.

Farmers' Markets of Nova Scotia. (n.d.a). Why buying local food is still important in 2023 (before it's too late). <https://farmersmarketsnovascotia.ca/2023/07/26/why-buying-local-food-is-still-important-in-2023-before-its-too-late/>

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Lesley Fleming, HTR visits the Halifax Seaport Farmers' Market as often as possible, enjoying the local flavors, traditions, and location on Halifax Harbor.

Active and Passive Engagement with Plants: Incorporating Interoception, Proprioception and Vestibular Senses for Therapeutic Outcomes

By Lesley Fleming, HTR & Kathryn Grimes, MAT, HTR

Photos by J. Fleming & T. Cooper.Unsplash

A core concept in horticultural therapy is engaging clients or participants in activities that address therapeutic goals, using plants, gardening, or nature activities in plant-rich environments. The engagement refers to the relationship or exchange between the therapist and the client (Chowdhury, 2019; Fleming, 2017); and the process of the client interacting with the plants or the environment (Fleming, 2023). Client:plant engagement, the focus of this article, is a multi-sensory experience, with stimulation of the five well-known senses and three lesser-known senses, contributing to therapeutic outcomes.

Engagement in this context is usually described as passive or active. Passive engagement constitutes some degree of connection by the client with the plant activity. For example, the client may listen but perhaps not discuss issues, or they may watch but not physically participate in plant activity. Clients with some health conditions like stroke or dementia may be passive while attending a horticultural therapy (HT) session, and therapists assign benefit to this passive engagement, such as intellectual stimulation, social engagement with others by sitting in a group, or access to fresh air/garden. Active engagement, easier to understand and identify, includes gardening tasks, participating in discussions, or sharing potting soil with group members.



Both passive and active engagement involve the individual's senses. Generally thought of as hearing, tasting, smelling, seeing, and touching, these senses are defined as a group of sensory cell types that respond to specific physical inputs corresponding to regions within the brain that send signals throughout the body (Hiskey, 2019). Stimulation of these senses elicit engagement; for example, a client may have a reaction to touching the softness of lamb's ear plant, tasting sour citrus, listening to the crunch underfoot of acorns, or smelling the fragrance of ylang ylang flower.

In addition to these five primary senses are three lesser-known senses now recognized by medical and therapeutic disciplines: interoception, proprioception, and the vestibular sense. Interoception refers to a person's awareness of the internal signals within their body, like hunger or itchy skin (Barker et al., 2021). Proprioception refers to how a person's body orients itself to the world around it and includes knowing the location and movement of body parts without looking at them; for example, holding a pencil or catching a ball (Pathways, 2023). The vestibular sense refers to a person's balance or equilibrium, allowing them to move smoothly and confidently. Just like the five primary senses, these three lesser-known senses can stimulate both active and passive engagement in clients when they interact with plants. And when HT practitioners intentionally introduce related therapeutic goals

and integrate multi-sensory interactions and activities to address these goals, therapeutic outcomes may be improved.

Sensory stimulation that results in active engagement is often easiest to identify. For example, to address the therapeutic goal of improving coordination, the therapist may provide the client an opportunity to pick up a tray of plants without looking at the object directly, stimulating proprioception. Likewise, to address the goal of improving balance and mobility, an activity may prompt the client to walk on uneven ground in the garden without stumbling, or to stand from a squat, stimulating their vestibular system (Fleming, 2022). Self-regulation goals are addressed when a client's interoceptive sense is stimulated, eliciting an active engagement response, such as when a participant moves away from thorny plants that scratched, or chooses to extend an experience they relish like letting cool hose water wash over their hands. Responding to interoceptive stimulation, or internal signals, provides opportunities for the client to practice coping mechanisms, decreasing aggressive or "over-the-top" reactions to stimuli (Fleming et al., 2023). These activities, all related to therapeutic goals, are multi-sensory. In addition to stimulating proprioception, interoception, or the vestibular sense, they also involve seeing, hearing, and/or touching.



In contrast to active engagement, passive engagement elicited from garden-based stimulation of the interoceptive, proprioceptive, and the vestibular senses may require more insight from the HT practitioner to understand the responses and apply them to therapeutic goals. This understanding, however, will guide the practitioner to explore and present opportunities to their client that expands both types of engagement, and that uses passive engagement to segue to more active interactions.

A passive response to interoceptive stimulation, for example, may be difficult for the therapist to discern because they may not see a client's internal responses to plants when they occur. A plant's rough texture will induce an internal response even if there is no outward sign of the touching response. In this case, the therapist may introduce the therapeutic goal of increasing interaction with others and may incorporate activities such as discussions of the plant's texture, or choosing a preferred plant to share with others, thereby moving a passive response to an active one to make it more visible. Likewise, a mobility-impaired client may respond passively to the vestibular stimulation received while walking along a challenging garden path. The therapist may activate the client's

engagement by introducing a therapeutic goal to improve motor planning. To address this goal, they may incorporate an activity such as sitting together in the garden within sight of the pathway and discussing how to anticipate and maneuver the uneven texture in a wheelchair or cope with the challenge. A passive response to proprioceptive stimulus might be avoiding a task like propagation. In this case, the therapist might introduce a goal to improve body awareness and incorporate incremental tasks that lead to filling pots with soil without looking. These tasks may be a prelude to typing on a computer and other life skills.

Integrating sensory stimulation into HT/TH activities is a standard therapeutic technique that yields measurable outcomes. When therapists become aware of their clients' passive and active responses to the lesser-known senses of interoception, proprioception, and vestibular balance, the insight may bring a greater depth to sessions and lead practitioners to expand their toolkits for therapeutic services.

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Lesley Fleming, HTR has had several articles published on the topic of horticultural therapy and sensory interactions. She co-authored “Self-Regulation, Its Neuroscience Foundations and Horticultural Therapy: Growing the Connections” with Maureen Bethel & Tasha Roberts published in the 2023 *Journal of Therapeutic Horticulture*. Kathryn Grimes, MAT, HTR, CIG has guided outdoor and garden-based programming for over 20 years in contexts that include schools, a community garden, parks and recreation, early learning environments, and the oldest and largest AZA-accredited zoo in Texas. As a Registered Horticultural Therapist and a Certified Interpretive Guide, she has designed and implemented therapeutic and sensory gardens, programs, walks, tours, and interactions that focus on care for the environment and affect human well-being.

This article and the following one - [Case Example: Using Sensory Experiences to Improve Self-Regulation](#) article are being published concurrently in Florida Horticulture for Health Network's [Cultivate](#).

Case Example: Using Sensory Experiences to Improve Self-Regulation

By Kathryn E. Grimes, MAT, HTR

Photo by P. Goodwin.Unsplash

On hot summer days, a favorite activity of the toddlers and preschoolers in the therapeutic early childhood garden program was getting wet! When given a spray bottle of water or a watering can for the plants, the children responded with relish to the refreshing feeling of water on their arms, hands, or faces. Seeing the children's willingness to participate in this sensory experience, the therapist looked for ways to develop interactions that would use this interoceptive stimulation to address self-regulation goals, for example, coping with the arduous task of waiting their turn or giving a turn to a classmate. Two structured types of interactions emerged as being particularly effective.

The first structure was a watering can refill station. With a group of 12 motivated children, 3-4 small watering cans were made available with the staff person stationed near the hose. The children formed a line along the fence and as the watering can was filled, it was passed to the first child in line. After the child watered the plants and cooled off, their task was to approach the next child in line, make eye contact, hand them the empty can, and say, "It's your turn!" The receiving child would respond, "Thank you!" and accept the can. Only after this exchange would the watering can be refilled. Taking turns was sometimes difficult, but prompting or modeling would usually improve a successful interchange. If, after the prompts, a child was still not ready to pass off the watering can, they could keep it, but it would not be refilled. Eventually, they would lose interest and drop the watering can somewhere in the garden, and another child would pick it up and return it to the queue where the practice in self-regulation continued.

The second effective structure was a game we played while staff watered plants with the hose and a spray nozzle. Toddlers and preschoolers alike loved to thrust their hands into the shower stream of water and feel the coolness wash over them. To address the goal of self-regulation while waiting for their turn, the water game involved a chant to help the children anticipate their turn to get wet. As the plants were watered the leader chanted, "Pat your hands on your knees; pat your hands on your knees; pat your hands on your knees; now one... two... three... go!" On "go!" they could put their hands back into the shower of water until the chant began again. On days when they were allowed to get wet all over, with the word "go!" the water was directed overhead into the air, and they ran, sprinkler style, through the water, squealing with delight, stimulating their proprioceptive and vestibular senses as well. After running, they returned to the planter, eager to participate once again in the goal-enforcing activity.

Sensory stimulation can be a powerful tool in a therapeutic gardening program, especially when it provides experiences, such as these, that are self-motivating to the participant through their interoceptive, proprioceptive, or vestibular senses. By using this motivation to develop a structure for interaction that addresses the individual's or group's goal, the therapist adds an extra layer of benefit to time in the garden, improving outcomes for the participants.

Resources Winter 2024



[Canadian Farmers' Markets](#) Marches Publics Canadiens is a “coalition of farmers’ markets associations building & strengthening local food systems across the country... [It is] a nationwide forum for collaboration & advocacy & the voice of Canada’s farmers’ market sector”.

[National Farmers’ Market Nutrition Coupon Program](#) is calling for action from the Canadian federal government to strengthen & grow this type of investment.

[Farmers’ Markets throughout Canada](#) are listed online on the Canadian Farmers’ Markets website *Resources* page.

[World Farmers’ Markets Coalition](#) was initiated in July 2021.

The largest farmers’ market in Canada - [St. Jacobs Farmers’ Market](#) in Ontario showcases its markets spanning 4 buildings, on a YouTube video.

Publisher & Editor in Chief Lesley Fleming, HTR

Contributors

Tim Mason, Kathryn Grimes, Florida Horticulture for Health Network, Siang Yu Tham

K. Carroll, Common Roots Urban Farm, Farmers’ Markets of Nova Scotia,
Naturally Wood, T. Cooper, P. Goodwin, Clever Visuals, Unsplash

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We would like to acknowledge Nova Scotia is traditional territory of the Mi’kmaq people.