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Native Plant to Know

Beebalm

Monarda didyma

by Judy Barnhart

As I relax on the front porch of my log home in Newbury, Ohio, on a sunny summer afternoon, dinner cooking in the oven, my pollinator garden is abuzz with activity. Two ruby-throated hummingbirds race in from the surrounding woods to alight on the scarlet beebalm plants in bloom. I glance over at the hummingbird feeder at the other end of the porch, but there's no one there; the hummers prefer to drink nectar from my garden.

Beebalm (*Monarda didyma*) belongs to the mint family (Lamiaceae/Labiatae). A characteristic of the mints is their economic importance as a source of essential oils (think lavender or culinary herbs such as basil, sage, thyme, oregano, rosemary, spearmint and peppermint). Dividing the rhizomes of beebalm might release a strong scent of mint.

All members of this family have opposite leaves, square stems and irregular, two-lipped flowers with two upper petals and three lower petals. To Irene Fedun, the editor of this publication, the flowers of beebalm resemble bright red shrimps lined up

around the outside of a bowl in preparation for a party. With their deep tubes, they bloom from the inside out, the flower head appearing to enlarge as more flowers open. They are typically pollinated by hummingbirds and butterflies, which hover outside the flower to feed on the nectar rather than alighting. The flowers, due to their shape, cannot support the weight of bees and yet, on occasion, these industrious pollinators work hard, wiggling their way in to reach the



ILLUSTRATION BY KAITLIN BROUGH

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***The Blazing Star* is . . .**

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Do you have a beautiful native plant garden that deserves to be seen? Take us on a video tour! Six prizes – three for experienced gardeners and three for novices – will be given out. Submission deadline is September 1st. Visit nanps.org for details.

Seeking *Collinsia verna* seeds

A NANPS member is looking for seeds of spring blue-eyed Mary, *Collinsia verna*, an Ontario-extirpated species. Please contact seeds@nanps.org if you can help.

How to Create a Pollinator Garden

NANPS has a new resource available for anyone starting a native plant garden: *How to Create a Pollinator Garden: A Beginner's Guide*. It provides information on how to plan, solarize, plant and maintain a successful pollinator garden, from start to finish. The guide was prepared in partnership with the David Suzuki Foundation and with funding from TD Friends of the Environment Foundation. Download it here: <https://nanps.org/wp-content/uploads/NANPS-How-to-Create-a-Pollinator-Garden.pdf>.

Shrubs Webinar Online

The webinar recording of "Native Shrubs for Your Garden with Colleen Cirillo" is now available at <https://nanps.org/events/save-the-date-native-shrubs-for-your-garden-with-colleen-cirillo/>. The link includes resources and answers to the questions posed to Colleen, such as which shrubs are tolerant of black walnut (*Juglans nigra*).



Woodland phlox (Phlox divaricata), a delicate spring bloomer

PHOTOGRAPH BY MICHAEL EDDENDEN

Food Forest

by Irene Fedun

They named it Nimkii-Wemtigwaaki-Tigaan, Thunder Forest Garden. They planted it to restore the food webs that support pollinators, birds and other animals, to regenerate the soil and to support the nearby native Carolinian forest. Just as important, they planted it to provide food for life for their son, Nimkii.

Fiona Caldwell-King, Clyde King and their 15-year-old son have lived on the Mississaugas of the Credit First Nation land south of Hamilton, Ontario, for the past six years. Clyde and Nimkii are Mississauga Anishinaabe with some Haudenosaunee ancestry; Fiona is an ally of Scottish-German descent.

Clyde and Fiona married young and lived in Brantford, Ontario, for many years, but it was always their dream to buy land on the reserve, build their own home and live off-grid. The city was crowded, frenetic, violence-prone. On the reserve, it's peaceful, spacious and there's a strong sense of community. Nimkii, who was anxious living in the city and fearful of birds, dragonflies, butterflies and other creatures, has become fascinated with the wildlife that visits the largely native plant garden. Among his favourites are the wild turkeys. They are eaten by the family, but only after eating their share of the garden's bounty – the extra planted for them and other animals. Gobbling plants from the garden makes the huge birds healthier and, in turn, more nutritious eating for the King family.

Sharing is key to life on the reserve – whether it be sharing food, seeds, labour or knowledge. Community elders and knowledge-keepers generously share what they know about saving seeds, rotating crops and learning from the environment. Monitoring the weather from year to year and planting with the moon's cycles are other pieces of good advice offered. An important mentor for Fiona and Clyde has been Joseph Pitawanakwat from Creator's Garden, who runs native plant workshops in the community.

A lot of information has been passed between nations for centuries. Terrylynn Brant, a Mohawk seedkeeper from the Six Nations reserve that borders the Mississaugas of the Credit First Nation, taught Fiona and Clyde many valuable lessons, including how to create pollinator strips between their annual plant beds. Her famous words still ring in Fiona's ears: "Just get up and do it."

That's precisely what the King family does. They work the hardscrabble land on their eight-tenths of a hectare (two acres), an old farm property that includes a rich, mixed woodland. They add amendments such as compost and fish to fertilize the land (plus their chickens provide manure). They use straw to cover their overwintering garlic and garden rows. It helps to keep topsoil in place through the winter months when it can get mighty windy there. Each year they plant a huge selection of vegetables, including Jerusalem artichokes (*Helianthus tuberosus*, a native species



In Ojibway, wild rose (*Rosa blanda* in the photo) is *Oginiiminagaawanzh*.

in the sunflower family).

Nimkii is an enthusiastic gardener. He digs and moves soil, plants garlic bulbs, helps start seeds in the greenhouse, waters and weeds. He loves wandering the land and picking wild strawberries (*Fragaria vesca*), which grow everywhere, just popping them into his mouth.

As nature lovers who want to keep themselves, the native wildlife and the medicines they make from plants pure and healthy, the Kings do not spray pesticides. Instead they rely on natural forms of insect and disease control, such as maintaining high floral biodiversity. Their chickens eat some of the dangerous ticks, which are a significant problem in spring and early summer, but the wild turkeys do an even better job of keeping the tick population under control.

The family continually plants native trees, shrubs and pollinator favourites such as goldenrods and varied asters, choosing species based on the natives that grow naturally in the surrounding undisturbed woodlands, one of the largest

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PHOTOGRAPH COURTESY OF THE KING FAMILY

intact Carolinian forests in southern Ontario. Last year they added wild black currants (*Ribes americanum*), a favourite with Clyde; luscious pawpaws (*Asimina triloba*); wild plums (*Prunus americana*); pretty, spring-flowering serviceberries (*Amelanchier* sp.) and others. They are always expanding the planting list: this summer they hope to add broadleaf arrowhead (*Sagittaria latifolia*), an edible native plant also known as duck-potato. They still discover treasures on the land: last year they found a chokecherry (*Prunus virginiana*) while getting rid of the dreaded European buckthorn (*Rhamnus cathartica*).

Furthermore, the foods have spiritual and cultural significance. Corn soup is served at traditional gatherings and celebrations. Clyde says it is made from the native white corn (*Zea mays*): “It is nutritionally much more dense than sweet corn.”

Clyde, the chef in the family, explains that lye made from wood ashes (especially from ash trees, which were once abundant) is used to break down the cell walls of the corn, making it softer and easier to digest. To learn more about the fascinating process of lyeing corn, visit [tworowtimes.com/arts-and-culture/history-of-nixtamalized-lyed-corn/](https://www.tworowtimes.com/arts-and-culture/history-of-nixtamalized-lyed-corn/).

Clyde also prepares a white corn bread made with kidney beans, which is lightly fried and makes for a hearty, nutrient-dense food. Another favourite recipe involves making mush out of corn that has been ground into a powder and cooked in water and maple syrup. Nuts and fresh berries can then be added.

Wild strawberries – called *odemini*, the heart berry, for their shape – are another culturally important food. They are among the earliest fruit to ripen and they provide medicine as well as nourishment, being high in antioxidants. Among their many uses: making a blood purifier from bitters derived from the roots, and mashing berries into a paste to clean teeth. What's more, as Nimkii



Nimkii wearing a traditional black ash basket that the family fashioned.



Painted stones with Ojibway names for the native plants

says, “Strawberry juice tastes delicious.”

This year the Kings will be making preserves and desserts from nannyberries (*Viburnum lentago*), wild plum and wild cherries (*Prunus serotina*). Even common milkweed (*Asclepias syriaca*) can be eaten, but you need to know what you’re doing, says Fiona.

Part of her self-imposed reconciliation work involves learning the names of the plants in Anishinaabemowin, which she finds much easier than learning the Latin equivalents! The native names are more descriptive and they teach her where each plant grows naturally or what it can be used for. Fiona encourages everyone to listen to the teachings of the elders and the knowledge-keepers. For decades, as a result of colonization, their intimate knowledge of the land and the relationships among all living beings was discounted; in some cases, the sharing of that knowledge was actively suppressed. And yet, what they knew, what helped preserve the vibrancy of the wilderness, is only now being proven by science. For example, Indigenous peoples knew that tree roots talk to each other through fungal connections, a process fully described in *Finding the Mother Tree* by biologist Dr. Suzanne Simard.

Clyde, Fiona and Nimkii are immensely grateful for their vast good fortune. Clyde has found fulfilling work: he does archeological monitoring on Indigenous lands during warmer months to ensure that new and existing digs do not encroach upon sacred sites and he has been training for the future rescue team on the reserve. Fiona organizes the plantings, from ordering seeds to planning the layouts to participating in planting and harvests. She reads and networks, conferring with elders to learn new techniques. Nimkii finds great satisfaction in participating wherever he can. They all take part in community projects, such as helping with community gardens or participating in citizen science projects (for example, monitoring eastern chorus frog populations) or helping to build a birchbark canoe, the first one crafted on Mississaugas of the Credit land in over a century.

They recognize and welcome the responsibility of protecting the land for future generations and all the ecosystems and wildlife – such as the provincially endangered Jefferson complex salamander – that still flourish on the reserve. For that we say, *chi-miigwech*, a big thank you.

American Chestnut Preservation

Upon learning that American chestnut trees (*Castanea dentata*) had once thrived in southwestern Ontario but were now struggling to survive, Fiona Caldwell-King contacted the Canadian Chestnut Council (CCC) for information. She was searching for healthy chestnuts that could be planted on First Nation land. *Castanea dentata* was once a prominent broadleaf tree in the forests of



PHOTOGRAPH COURTESY OF THE KING FAMILY

A Jefferson complex salamander in the King Family garden

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eastern North America. A significant source of nutritious nuts for people and many species of wildlife, from white-tailed deer to black bears to the long-extinct passenger pigeon, American chestnut populations declined rapidly after the accidental introduction of the chestnut blight in the early 1900s, probably from trees imported from Asia.

The CCC has a license from the province of Ontario to work with the American chestnut, an endangered species. The organization donates a minimum of 100 trees to any group committed enough to take on the work of planting and caring for them (canadianchestnutcouncil.ca). They have worked with provincial parks, conservation authorities, the Bruce Trail Association, Nature Conservancy of Canada and similar organizations. The chestnuts must be planted on protected properties where the likelihood of future development is almost nil. Proper soil conditions are critical for their growth. They must be planted in well-drained sandy loam or sandy soil with a pH of 4.5 to 6.5. The CCC offers no guarantee that the trees will be blight-tolerant. The widespread planting of American chestnuts in Ontario (as far north as Sault Ste. Marie) is intended as a preservation tool.

The CCC usually selects partnering organizations that can concentrate the planting of the 100 trees to one location. In the case of the Mississaugas of the Credit First Nation, they made an exception because the trees have historical and cultural significance for the Indigenous peoples. In their case, the trees were planted on adjacent properties with some going to the neighbouring Six Nations reserve. Each individual who took trees for their own property had to take at least five so that the trees might cross-pollinate. When she contacted her neighbours about this opportunity, Fiona found no lack of willing recipients among friends and family who recognized the value of regenerating native chestnuts.

The trees were planted in the summer of 2022. Tree guards were installed around the bottom of the trunks to protect them against rodents, especially rabbits. Stakes were placed with the saplings to support the guards. As a young tree grows, the guard will be moved up to prevent deer from foraging on the leader (the tip of the tree). If deer eat the leader, the tree will be stunted. Once the chestnut grows up to 1.84 metres (six feet), to the top of the wooden stake, deer are unable to reach the top of the tree.

The chestnut trees, which have proven to be good candidates for climate creep, will likely take seven years to produce nuts. With luck, the nuts will be tolerant of chestnut blight and the reserves will become a nursery for more American chestnut introductions.

Irene Fedun is the editor of The Blazing Star.



Ohio spiderwort (Tradescantia ohioensis)

PHOTOGRAPH COURTESY OF THE KING FAMILY

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Don't Swim in the Niagara River

by Paul O'Hara

I have a fascination with stories of peril in the wild. Almost every week there is a news piece about someone getting lost, over-heating, falling off a cliff or encountering a dangerous plant. Even in the heavily disturbed landscape of southern Ontario, you have to watch your step and plan your outings well. After 25 years of field botany work, I thought I'd share a few tips on moving through the landscape.

In pioneer days, folks in southern Ontario had to worry about bears, cougars, wolves and rattlesnakes. Today, after more than two centuries of habitat destruction, we're left with West Nile Virus (WNV), ticks and chiggers.

WNV is spread by mosquitoes that have fed on infected birds. It's carried by two species of mosquito that thrive in urban and suburban environments and can reproduce in dirty water. You ain't gonna get West Nile camping at Algonquin Provincial Park. (This begs the question: would the virus subside if we brought the spirit of Algonquin to the city through native plant garden and habitat restoration initiatives? I think yes.)

We have dog ticks and deer ticks. Dog ticks are lumbering buggers that take their time finding a place to feed. They hang out in meadows, marshes and thicket swamps. They don't carry Lyme disease but they can carry other crap like Rocky Mountain spotted fever and tularemia. Deer ticks are smaller, meaner and seemingly quicker at finding a spot to feed on our bodies. They hang out in forests and woodland edges, and they can carry Lyme.

Ticks feed on our blood. The more they suck up, the more they puff up. After several days of feeding, they pull their mouths out, drop to the ground and use their blood meal to produce offspring (if they are an adult female) or move on to the next stage of life (if they are a larva or nymph).

Don't mess around when it comes



Biologists, Gerry Waldron and John Ambrose, and "face-slapping poison ivy" on Pelee Island

to tick prevention. Ticks are most active in the spring, but you can pick up ticks at any time of year if the temperature is above freezing. Have tick protocols. If you're walking off trail, have a quick look down at your boots, legs and arms every 10 minutes. It's a lot harder to catch ticks once they get above the equator – your waistline. Do a tick check before you get back in the car or when you have a shower.

If the tick talk didn't gross you out, then maybe the chigger chat will. Chiggers are larval-stage mites not

visible to the human eye that reside in meadows and open woodlands. They attach to humans the same way as ticks to feed on our skin cells. Their mouth parts pierce the skin and inject digestive juices that dissolve our flesh. A chigger will eat the dissolved flesh and fall off after a couple of days, leaving a red bump on your skin. Chiggers don't carry nasty diseases, but the poison ivy-like blisters take a couple weeks to heal. Like ticks, chiggers are migrating north with the warming climate.

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PHOTOGRAPH BY PAUL O'HARA

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I had WNV almost 20 years ago when it was first spotted in Ontario. My neck and shoulders were achy and I had a rash on my chest. I was fine after 10 days but some folks get really sick or die. I'm pretty sure I have had Lyme too. I was exploring a lot in Niagara back then and remember rubbing a spot on my calf and seeing a smear of blood. Soon after, a bull's eye rash appeared and a few weeks later the glands in my neck swelled up. Much later, I decided I must have picked up a Lyme-infected deer tick nymph. I've also been nailed by chiggers a few times – the worst was during some late-spring field work on Pelee Island.

Getting to know the personalities of plants in southern Ontario habitats

helps hikers and explorers avoid getting sick or just plain annoyed. The parsley family (Apiaceae), with its umbellate flowers, is full of plants with lots of personality! Wild parsnip (*Pastinaca sativa*) and giant hogweed (*Heracleum mantegazzianum*) are horrid invasive herbs. The former is common in roadside meadows, the latter a species of floodplains. If you break the stems of either and get the sap on your sun-exposed skin, you could develop painful blisters. (Note that our native cow parsnip [*Heracleum maximum*] grows in the same habitat as giant hogweed.)

Spotted water-hemlock (*Cicuta maculata*), bulb-bearing water-hemlock (*Cicuta bulbifera*) and hemlock water-parsnip (*Sium suave*)

are wetland herbs that I relish seeing in the wild, but they are the most toxic plants in our native flora. A few bites of any parts – especially the root – will throw you into convulsions and respiratory failure.

Watch out for ragweed (*Ambrosia artemisiifolia*) and giant ragweed (*A. trifida*) in late summer. Both are native annuals in the composite family (Asteraceae) that colonize open ground. Ragweed grows in fields and gravelly roadsides, while giant ragweed is found in floodplains and wet meadows. If you get a blast of the light, dusty pollen of either ragweed at peak flowering time you could have a sneezing fit or, if you're particularly sensitive, break out in hives.

Most folks know to avoid the sticky



PHOTOGRAPH BY PAUL O'HARA

A large poison sumac (*Rhus vernix*) in a thicket swamp near Port Stanley, Ontario



The thorny trunk and twigs of common prickly ash (*Zanthoxylum americanum*)



A stand of wood nettle (*Laportea canadensis*) in a floodplain near Tillsonburg, Ontario

burs of non-native burdocks (*Arctium minus* and *A. lappa*) in meadows and woodland edges, but many herbs have hooked seeds that aid in their dispersal. White avens (*Geum canadense*), enchanter's nightshade (*Circaea canadensis*) and Virginia stickseed (*Hackelia virginiana*) are native wildflowers that prepare the ground of early successional forests for more conservative herbaceous species, but their abundant sticky seeds can ruin a pair of pants or socks.

There are lots of prickly plants in the rose family (Rosaceae), like brambles, hawthorns and roses. Non-native invasive species such as multiflora rose (*Rosa multiflora*) and dog rose (*Rosa canina*) are common in disturbed meadows, thickets and open woodlands in southern Ontario. They're large shrubs, up to three or more metres (nine feet) high, and much pricklier than native roses like Carolina rose (*R. carolina*), smooth rose (*R. blanda*) and swamp rose (*R. palustris*). Both multiflora rose and dog rose are packed with large, hooked thorns. The arching canes of brambles (*Rubus* spp.) – our native raspberries and blackberries – are easier to walk through but they're still literal pain-in-the-asses, especially the larger, thornier Alleghany blackberry (*Rubus alleghaniensis*).

Our native hawthorns (*Crataegus* spp.) are always up for a good poke. Hawthorns are wonderful small trees highly prized by wildlife for their pollen-rich flowers and nutritious fruits, but most hawthorns sport long thorns measured in inches. Some species, like the common dotted hawthorn (*C. punctata*), have compound (branching) thorns growing from their trunks. There's always a danger of hitting a thorn at eye level but, in my experience, you're more likely to get your shins or knees nailed by a hawthorn seedling while wading through a meadow, or to puncture your palm on a trunk thorn while steadying your step.

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Common prickly ash (*Zanthoxylum americanum*), a member of the citrus family (Rutaceae), is one of our meanest native shrubs. The branches have thorns. The twigs have thorns. Even the leaves have thorns. Walk through a dense stand of this shrub on a limestone plain and you'd be ripped to shreds.

By midsummer, stinging nettle

(*Urtica dioica* ssp. *gracilis*) and wood nettle (*Laportea canadensis*) are out in swamps and floodplains. A knee or elbow bump against the hypodermic needle-like hairs on the foliage and stems will get you rubbing your arms and legs for a couple of hours. Rice-cut grass (*Leersia oryzoides*) is another native perennial of wetland habitats. Its abrasive leaves can slice through

human flesh like a razor, so best to leave the daisy dukes at home when walking through marshy habitats.

Of course, there is the ubiquitous native vine, poison ivy (*Toxicodendron radicans*). Get to know poison ivy in all its forms: the groundcover (*T. radicans* var. *rydbergii*) and the climber (*T. radicans* var. *radicans*). In the rich deciduous woodlands of southwestern Ontario and the eastern U.S., the vigorous climbing vines can send out lateral branches that my colleague Gerry Waldron calls "face-slapping poison ivy." In a high-quality thicket swamp you might encounter poison sumac (*Rhus vernix*), an attractive small tree whose leaves, branches, flowers and fruits all contain the compound urushiol, which causes contact dermatitis.

Avoid sampling random fruits in the wild – many seemingly edible fruits can make you sick. This includes native species like Solomon's seal (*Polygonatum pubescens*), jack-in-the-pulpit (*Arisaema triphyllum*), baneberry (*Actaea* spp.), pokeweed (*Phytolacca americana*), snowberry (*Symphoricarpos albus*) and Canada yew (*Taxus canadensis*), as well as non-natives like European buckthorn (*Rhamnus cathartica*), glossy buckthorn (*Frangula alnus*), deadly nightshade (*Solanum dulcamara*) and others.

In closing, don't rely on your phone for navigation. Keep a compass in your pack, bring a paper map and let someone know where you're going. Watch your step on ankle-busting talus slopes and avoid icy trails along the edge of the Niagara Escarpment. Don't mess around water bodies without a life jacket and, for frig sake, don't swim in the Niagara River. Not anywhere along it. Not above the falls. Not below the falls. Not at the whirlpool. Nowhere.

Paul O'Hara is the owner/operator of Blue Oak Native Landscapes (blueoak.ca) and the author of A Trail Called Home: Tree Stories from the Golden Horseshoe.



PHOTOGRAPH BY PAUL O'HARA

The flowers and ripening fruits of pokeweed (Phytolacca americana)

Stoneleigh: a *natural garden*

by Mae Axelrod

How do we save the places we love? Bulldozers show up at a forest we thought was forever. An iconic farm becomes a strip mall. Historical landscapes – community landmarks – disappear. Those who value nature are left feeling hopeless.

And yet, in a town just outside of Philadelphia, Pennsylvania, the story ended differently: nature survived, thrived and bloomed. The natural restoration of Stoneleigh: a *natural garden* demonstrates how we can save the places we care about, and how those places can go on to inspire others.

Stoneleigh's history as a private estate dates back to 1877, when Edmund Smith, a rising executive with the Pennsylvania Railroad Company, purchased land in Villanova and constructed a residence there. At the turn of the 20th century, Samuel

Bodine acquired the property. In 1908, Bodine hired the Olmsted Brothers of Massachusetts – sons of Frederick Law Olmsted, the famous landscape artist and conservationist – to design vistas and pathways, establish gardens and terraces, and choose many of the trees at Stoneleigh.

Following Samuel Bodine's death in 1932, Stoneleigh was subdivided and sold. Otto Haas, entrepreneur and co-founder of Rohm and Haas Company, purchased the southwestern portion of the estate, launching a more-than-80-year tenure of careful stewardship by the Haas family. Otto and Phoebe's son, John, and his wife, Chara, acquired the property in 1964 and lived there for the next five decades.

"Our parents took great joy in caring for their lovely gardens and natural areas," said John and Chara's son David. But Stoneleigh was more than a grand estate with historic gardens – it was also a home. The

"great lawn," designed to offer sweeping views from the house, was also a level spot for a swing set. The herringbone brick paths that connected rose-filled beds were an ideal place for playing hide-and-seek. And the Circle Garden, a centerpiece of the landscape design, offered a charming setting for croquet matches with friends.

To protect Stoneleigh in perpetuity, John and Chara called on Natural Lands, the largest and oldest land conservation nonprofit in the region. Together, they placed on the property a conservation easement, a voluntary and legally binding agreement between a landowner and a qualified conservation organization that permanently limits a property's use. The agreement applies to all present and future owners of the land. An easement ensures that the property is

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The lych gate at Stoneleigh

PHOTOGRAPH BY MAE AXELROD

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never developed, saving the habitat for wildlife and maintaining its natural beauty for the community.

John passed away in 2011 and Chara the following year. Their will stipulated that Stoneleigh would be given to a worthy nonprofit organization. After careful consideration, the Haases' children decided to entrust Stoneleigh to Natural Lands, which cares for thousands of acres of preserved land from the Pocono Mountains in Pennsylvania to the Delaware Bayshore in New Jersey. The nonprofit began the process of turning a family home into a public garden.

Just three weeks before Stoneleigh's grand opening in 2018, the local school district threatened to condemn the property and seize Stoneleigh. Eminent domain gives government entities the power to take private property for public use. Typically, it is used when the needs of the public are seen as outweighing the needs of a landowner, and it is done for the good of the community. But what if the public doesn't agree that the government plan is a good one?

The community responded to the announcement with a groundswell of support for maintaining the property as a public garden. The petition to save Stoneleigh was signed by 40,000 people and thousands more reached out to their elected officials. This monumental public pressure led to new Pennsylvania state legislation to further protect land under conservation easements. The new law protects Stoneleigh, as well as the 309,449 other properties in the state that are under a conservation easement.

Today, Stoneleigh is a dream realized. The native plant paradise and community treasure is open to the public, for free, in every season. It boasts more than a mile of accessible pathways. Staff have reimagined the historical landscape with meadows of wildflowers and tall grasses that provide essential habitat for

pollinators. Towering trees age gracefully alongside new plantings. Redbuds (*Cercis* spp.), dogwoods (*Cornus* spp.) and trumpet honeysuckle (*Lonicera sempervirens*) are among the 600 trees and 100 vines found here. Standing in the garden, it's easy to forget that Stoneleigh is just a short trip from bustling Philadelphia.

Each section of the garden is filled with the vibrancy of the region's native plants. Stoneleigh's horticulturists have collected nearly 400 different taxa from Natural Lands' preserves and propagated them for use at Stoneleigh. Plants that support insects such as pollen-specialist native bees are

prioritized when adding to the collection.

Staff collected wild seeds of Robin's plantain (*Erigeron pulchellus*) from



PHOTOGRAPH BY SAM NESTORY

Black swallowtail butterfly on blazing star (*Liatris* sp.)



PHOTOGRAPH BY CAROL DAILEY

A young fox finds lots of natural cover at Stoneleigh.

several of Natural Lands' nature preserves – white, pink, and lavender varie – ties – to provide ground cover and spring colour. The prickly pear cacti (*Opuntia humifusa*) near the Tudor-revival mansion were cultivated from seeds found at Harold N. Peek Preserve in New Jersey. Stoneleigh has developed a collection of wax myrtle (*Morella* sp.) grown from seeds gathered at multiple preserves in order to promote genetic diversity and select the most evergreen specimens.

Stoneleigh is designed for beauty and biodiversity: to serve wildlife, sustain rare species and inspire guests with a thriving landscape of the kind that is essential to the health of our planet. An excellent example of this are the many hedges at Stoneleigh. The 200-foot-long (60-metre) wildlife hedge around Catalpa Court is a dynamic mix of dozens of species of evergreen and deciduous trees and shrubs that provide pleasing aesthetics during all seasons.

The ecological practices used at Stoneleigh are designed to support the local ecosystem. When Natural Lands began caring for Stoneleigh in 2016, there were more than 14 acres (5.6 hectares) of turf. Many of these areas have been converted to meadows, which need to be mown only once a year, reducing staff time, fossil fuel use and disruptive noise. The meadow grasses also provide wildlife with cover from predators and food for beneficial insects.

In the five years since Stoneleigh became a public garden, the quantity and quality of bird habitat has increased, providing improved cover and foraging opportunities. Since May 2017, 111 species of birds have been recorded at Stoneleigh, including species not previously seen there: Black-capped Chickadee, Northern Harrier, Barn Swallow, Northern Rough-winged Swallow, Blue-winged Warbler, Veery and Nashville Warbler.

Guests are delighted by the pair of Red-tailed Hawks that have made the garden their home. In late summer,

American Goldfinches are a common sight feeding on the seeds of green-headed coneflower (*Rudbeckia laciniata*), giant coneflower (*Rudbeckia maxima*) and purple coneflower (*Echinacea purpurea*).

Stoneleigh is a living demonstration of what can be achieved when a community comes together to preserve a special place. The land that was saved now serves as a stage for events and performances, and a peaceful oasis.

During their ownership of the property, John and Chara Haas welcomed the public once a year to their private estate. Now that Stoneleigh is open to guests year-round, their words resonate with many more garden admirers: “We hope that you enjoy your visit here and, when you depart, may a bit of the

peacefulness and beauty, which is so much a part of Stoneleigh, be with you.”

Mae Axelrod is a writer and photographer who lives in Pennsylvania. She currently works as the media relations manager at Natural Lands. Visit stoneleighgarden.org



Tufted Titmouse

PHOTOGRAPH BY DAVID KORBONITS



Prickly pear cactus (*Opuntia humifosa*) in a Stoneleigh garden bed

PHOTOGRAPH BY SAM NESTORY

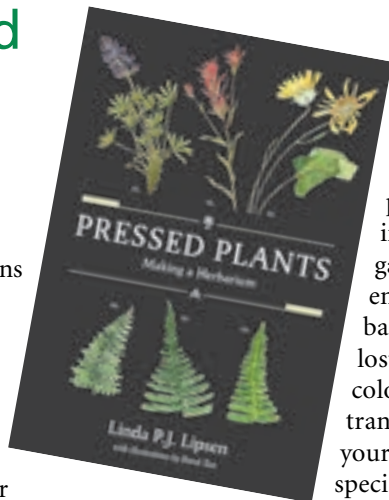
New & Noted

Pressed Plants – Making a Herbarium

by Linda P.J. Lipsen

The Royal BC Museum, 2023

92 pages, pen and ink illustrations



This book includes detailed information on how to collect, press and mount plants, and prepare an herbarium. The introduction encourages non-professionals to collect plants for science, but both novices and student botanists can benefit from this resource. The pen and ink illustrations are excellent and clearly illustrate the plant parts or items mentioned in the text.

The author provides several reasons why herbarium specimens are important to botanical studies:

- They provide a permanent historical record of the distribution of a species.
- Distribution maps for each species are developed based on location data from herbarium sheets.
- They help track changes in distribution over time, especially with regard to recently introduced species with expanding ranges or native species with declining ranges, or to document range differences due to climate change.
- Herbarium specimens help botanists correctly identify species, providing a standard for comparison with their specimens.

• A single herbarium specimen cannot exhibit the entire range of physical traits nor seasonal features that occur across a species range, but many specimens of each species will provide a more complete picture of the species traits across its range.

The first chapter includes a list of supplies needed to collect specimens, such as secateurs, a field notebook, a hand lens, plastic baggies to store plants, etc. Paper tags are mentioned as a way to identify your finds, but using an indelible black marker to write the collection number on the plastic bag, then recording the pertinent information in your notebook may be more convenient than paper tags, which can deteriorate when wet. For people doing a lot of

collecting, carrying your plastic baggies in a large, black garbage bag will ensure individual baggies are not lost. The black colour will reduce transpiration of your bagged specimens, keeping them fresher.

Basic information on the usefulness of waterproof field notebooks and global positioning system (GPS) units is provided, but it would be more useful if brands, such as Rite-in-the-Rain notebooks and SPOT devices, were listed directly under the appropriate headings. The section on safety provides very good advice on keeping safe in the field, but bear bangers to deter bears could also be carried in areas where encounters may occur, particularly northern rural areas.

I particularly liked the section on Responsible and Ethical Collecting, since First Nation rights are often overlooked. Written permission and appropriate collecting permits should also be obtained well in advance when planning to collect in protected national and provincial parks and reserves.

The chapters on collecting, pressing, mounting and preserving your specimens provide all the information needed for making useful and attractive specimens. Taking photographs, including of the habitat, is mentioned as part of the documentation process and cannot be emphasized enough. Be sure to take a photo or two of the surrounding area, including distinct landmarks, so that sites can be located again easily, even without coordinates.

The book offers some good tips for the collector:

- Add a wet paper towel to your collection bags to keep plants fresher.
- Cut open a flower or two of a specimen and press it to reveal the sexual organs. Mount these flowers on the same sheet as the main collection to prevent or reduce the need to tease

apart closed flowers, if a better view of diagnostic floral parts is required for identification.

• Cut the thicker stems or roots lengthwise before pressing to facilitate drying. (To avoid exudates from the cut surface causing the specimen to stick to the newspaper, I recommend putting a section of wax paper under the cut surface before pressing. This also works for pressing fleshy fruits, with the wax paper placed above and below the fruit.)

The section on key features of select plant families is useful if the collector does not have access to other references. This list of references and resources relates primarily to British Columbia. Devoting this space to a more complete list of companies that sell herbarium supplies, GPS units and field supplies might have been more useful for beginning botanists and naturalists, as well as resources from other provinces.

A couple of errors should be mentioned. On page 28, the author writes: "The combination of genus and species (or what botanists call a specific epithet) ..." This is incorrect, although a common mistake. The specific epithet is the second word in a binomial plant name. A species name is composed of the genus followed by the specific epithet. For example, *Quercus rubra* is the scientific name for red oak. The specific epithet *rubra* does not identify red oak and simply means red in Latin. Specific epithets are not unique and can be used with a variety of genera to make up a species name.

Relating to the proper naming of plants, it should be noted that the International Code of Botanical Nomenclature (ICBN), mentioned on page 72, was superseded in 2018 by the International Code of Nomenclature for Algae, Fungi, and Plants (ICN), often referred to as the Shenzhen Code.

Review by Susan J. Meades, a field botanist with over 45 years of field experience and the author of the Flora of Newfoundland and Labrador website.

nectar. Bees, unable to distinguish red in the colour spectrum, are less likely to pollinate *Monarda didyma* though.

Beebalm typically blooms from June to September. In my garden, it grows two to three feet (half a metre to one metre) tall, depending on competition from surrounding plants, including white beardtongue (*Penstemon digitalis*), great blue lobelia (*Lobelia syphilitica*), false sunflower (*Heliopsis helianthoides*), young cup plants (*Silphium perfoliatum*) and blunt-leaved mountain mint (*Pycnanthemum muticum*), which I love for its silvery bracts that persist into the fall and its popularity with pollinators. Each plant is jockeying for space in its race towards the sun. One year, I was surprised by the colourful combination around Independence Day. The weather conditions must have aligned just right: the beardtongue was hanging on, the beebalm was in full bloom and the

lobelia had flowered early. White, red and blue to celebrate the holiday! They haven't bloomed together since.

Beebalm is also known as Oswego tea, because the Oswego Native Americans of New York used it as an herbal tea to treat stomach ailments. Famous naturalist and explorer John Bertram, considered the "father of American botany," visited an Oswego Indian outpost during the Revolutionary War and found settlers making a minty tea.

The genus name *Monarda* was given by Swedish botanist Carl Linnaeus to honour a 16th-century Spanish physician, Nicolas Monardes, who sent him specimens from the New World. The species name *didyma* means paired, referring to the two long and two short stamens. The common name does not refer to pollination by bees, but the fact that the oil in the leaves is used to treat skin irritations and soothe bee stings.

Beebalm is found in open, wet woodlands and stream margins throughout the United States from New England to the Rocky Mountains and north into eastern Canada. A related species, wild bergamot (*Monarda fistulosa*), has pale lavender to white flowers and tends to be found in woodland openings and borders. It, too, is a popular choice for native plant gardens.

Garden centres often sell a popular cultivar known as purple bergamot (*Monarda x media* Willd.), a hybrid between *M. didyma* and *M. fistulosa*. It is considered a native species in the eastern U.S. and Canada. Because the hybrid regularly produces viable seed, more taxonomists have recently accepted it as a species.

Beebalm has few issues with pests or diseases but it can get powdery mildew on the leaves in wet years. This does not affect the flowers or deter hummingbirds from coming for

dinner. Divide your beebalm in spring or fall and enjoy the minty aroma. Dig up the underground rhizomes and split them. I pot them up and give them away as they become too numerous for my garden.

Most importantly, take time to enjoy the diversity of pollinators that visit this lovely plant and other natives in your garden this summer.

Judy Barnhart is president of the Native Plant Society of Northeastern Ohio (the founding chapter of the Ohio Native Plant Society).



Beebalm with green-headed coneflower (*Rudbeckia laciniata*) in the background



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