



Native Plant to Know

Green Dragon

Arisaema dracontium

by Madison Woods

In my neck of the woods in the remote Arkansas Ozarks, there's a wandering path alongside a trickling creek, through the tall trees where the shade is deep. I go there in search of specific plants that are hard to find outside of this very narrowly defined habitat.

Jewelweeds (*Impatiens capensis* and *I. pallida*), with their dangling yellow or orange-spotted blossoms, and punishing stinging wood nettles (*Laportea canadensis*) flank my thighs as I wade through the vegetation. Wake-robin trilliums (*Trillium sessile*) are so abundant that it's hard to step without crushing one underfoot. This woodland is favoured by wild geranium (*Geranium maculatum*), bloodroot (*Sanguinaria canadensis*), blue cohosh (*Caulophyllum thalictroides*) and goldenseal (*Hydrastis canadensis*). It's the kind of woods where endangered plants like American ginseng (*Panax quinquefolius*) grow. It's also the sort of enchanted place where green dragons lurk.

While the green dragons (*Arisaema dracontium*) are not as rare as ginseng, they are not abundant. To see a plant, I have to travel deep into the cool, dark woods.

Here in the Ozarks, green dragons favour the lower levels of hills, where the shade is cool and the ground stays



The *Blazing Star* is . . .

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The Year of the Bird

The National Audubon Society and National Geographic have declared 2018 – the centennial year of the signing of the United States Migratory Bird Treaty Act – the Year of the Bird. Over 100 organizations have joined forces to tell stories and examine how our changing environment is affecting birds around the world.

To kick the year off, *National Geographic* published an article in their January 2018 issue entitled “Why Birds Matter” by Jonathan Franzen. As if any nature lover would even ask that question. And yet it's important, in an era where human concerns often overwhelm conservation issues, to delve into why we need to care about birds. The reasons Franzen offers are as many and varied as the planet's birds which “can be found in every corner of every ocean and in land habitats so bleak that they're habitats for nothing else”. The reason that stands out the most for me is that we, as individual humans and as a global society, are responsible for our actions and the impact they have upon our natural world. As Franzen writes, “If we're incomparably more worthy than other animals, shouldn't our ability to discern right from wrong, and knowingly sacrifice some small fraction of our convenience for a larger good, make us more susceptible to the claims of nature, rather than less? Doesn't a unique ability carry with it a unique responsibility?” Native plant gardeners, enthusiasts and conservationists are positioned to make a difference by preserving and restoring (even in small gardens) native ecosystems that support birds, insects and other wild animals. We take on that responsibility willingly.

Let us all work this year, in whatever capacity we feel drawn to, to preserve and enhance native habitat for wildlife and humans, with joy and hope for a bright future. Happy plant and birdwatching!

Irene Fedun

Editor of The Blazing Star



PHOTOGRAPH BY © CAROL L. EDWARDS

Cedar waxwing gorging on berries from a native serviceberry (*Amelanchier* sp.)

NANPS Events

ANNUAL NATIVE PLANT SALE

SATURDAY, MAY 5, 2018, 9:30 a.m. – 2:30 p.m.

TORONTO BOTANICAL GARDEN, 777 LAWRENCE AVENUE EAST (AT LESLIE), TORONTO

Hundreds of wildflowers, shrubs, trees, ferns, vines, sedges and grasses available.

We welcome donations of native plant cuttings, seedlings and seeds on sale day.

Please label them with common and botanical names and indicate where the seeds were collected and what year. Thank you!

PLANT SALE AT CHRISTIE PITS

Sunday, May 27, 2018, noon – 4 p.m.

Christie Pits Park, Christie and Bloor, Toronto

Dozens of tables of native plants for sale in a lovely outdoor setting.

Carry it on: Land and Reconciliation

by Janice Keil

For seven years I cycled up and down drumlins, around eskers and along shorelines searching for vacant land suitable for an organic farm in the Greater Golden Horseshoe Area east of Toronto. As soon as I stepped onto the piece of land I am now honoured to care for and saw the huge survivor of an American elm (*Ulmus americanus*) – an arboreal metaphor for my own life as a trauma survivor – I knew the search was over. It was as if the flora and fauna, the rocks and vernal pools were saying, “We are so glad that you have come.”

The Wisconsin ice sheet that covered this part of central Ontario over 12,000 years ago had a tremendous amount of fun, as evident in the geological formations that remain. Lake Iroquois, the predecessor to Lake Ontario, inundated the Trent Embayment in Northumberland County leaving glaciolacustrine silts (sediments deposited into lakes that come from glaciers) in the woodlands and wetlands. Huge mounds of glacial erratics piled up like beached whales in the fields in “The Land Between” – that narrow dancing ribbon of land straddling the St. Lawrence Lowlands and the Canadian Shield. This ecotone, with the highest biodiversity in the province, has limestone and granite, shagbark hickories (*Carya ovata*) and boreal forest trees, alvar ecosystems and the karst features of sinkholes, caves and underground streams within prime agricultural land. It is a testament to the natural creativity of liminal spaces.

For the last two decades, the beach gravel of the Lake Iroquois shoreline has been the prime target for an aggregate excavator. The 30-metre (33-

Hold your head up
Lift the top of your mind
Put your eyes on the Earth
Lift your heart to your own home planet
What do you see? What is your attitude
Are you here to improve or damn it
Look right now and you will see
We're only here by the skin of our teeth as it is
So take heart and take care of your link with Life and
Oh carry it on...

Carry It On by Buffy St. Marie

yard) high cliff, raped of its natural treasure, has disappeared, but the other end of this glacial kame still stands and is known to locals as Bobolink Hill because the at-risk

about in summer, mixing with giant swallowtails that feed on the locally native prickly ash shrub (*Zanthoxylum americanum*).

This land, this in-between place, has become my teacher. It whispers to me how it wants to be carried into the future. It challenges me to break out of that safe space where the concept of private ownership of property is accepted as status quo. It leads me to question land possession through generations of farm families without wondering about that conveniently missing piece: Who lived on this land and revered it before colonization?

Three things woke me up: the land itself, the powerful indigenous voices on CBC Radio's program *Unreserved* during Canada's sesquicentennial in 2017, and the bugle call of the late



PHOTOGRAPH BY JANICE KEIL

songbird nests here. The adjoining field is partially covered in common milkweed (*Asclepias syriaca*), providing food for monarch butterfly caterpillars. The adult monarchs flutter

musician Gord Downie to do better in the next 150 years. I realized that even though I possess a piece of paper

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called a deed, I do not really “own” these 39.4 hectares (97.3 acres). But I have been blessed to steward this land until my death. For these reasons, I made the decision to begin the process of returning (repatriating) this land to the Alderville First Nation of Rice Lake. Unbeknownst to me, there was no direct precedent for this in Canada, but when I did an interview with Rosanna Deerchild on *Unreserved* in October 2017, it elicited enthusiastic responses from across the country, especially from landowners who realized they could do the same thing.

In response to the Truth and Reconciliation Commission’s release of *94 Calls to Action*, Canadians are engaging in many important activities: acknowledging land (recognizing the traditional territory of the indigenous people who called the land home before the arrival of settlers), supporting The National Inquiry into Murdered and Missing Indigenous Women and Girls and educating themselves about the legacy of residential schools and intergenerational trauma. But I don’t believe we, as settlers, can forge a path towards reconciliation on Turtle Island (the name some First Nations gave to North America) without having a brutally honest and tough conversation about the land question, whether privately owned or under the control of the Crown.

That conversation started for me in November 2017 when Ian Attridge, an environmental lawyer at Trent University in Peterborough, and I were

warmly welcomed by Chief James Marsden and Alderville First Nation council members. It marked the beginning of trusting one another and building a relationship together. The

discovered.

In the meantime, there is a lot of work to be done to restore land and water ecosystems. Over time, eight hectares (20 acres), which is now non-native grassland, will be returned to tallgrass prairie, providing a home in perpetuity for the dwindling populations of bobolinks and eastern meadowlarks that live there now. The tallgrass, now considered an agricultural specialty crop in Ontario, will be harvested for seed production. Twelve more hectares (30 acres) will be planted in native trees to provide wildlife corridors. They will complement the existing eight hectares of hydrologically significant mature woodlands of sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), black cherry (*Prunus serotina*), bitternut hickory (*Carya cordiformis*), ironwood (*Ostrya virginiana*), blue beech (*Carpinus caroliniana*) and eastern white pine (*Pinus strobus*) and the numerous spring ephemerals, ferns, forbs and shrubs that form the understorey.

A cross-laminated timber house will be built on the land in 2019. I envision it as an extension of the woodlands. This single-family residence will be a low-carbon example of the circular economy and a training module for a sustainable feminist

building project I have initiated called Active Women Building. In the future, this program will have all-women crews building affordable housing for women and children across Canada to the standard set by the European



Common milkweed

next time we get together (with food, of course) will be for a ceremony on the land. Our path forward will shape itself over the years ahead; we may end up with an indigenous land trust model or something yet to be

Union's *Passivhaus*. Passive houses have super-insulated building envelopes without the need for a furnace, only a high-efficiency heat recovery ventilator. My house will also conserve water through rainwater harvesting, greywater and blackwater recycling, be on a microgrid and use natural, healthy building materials that cause minimal harm to the environment.

Before all this happens, NANPS members and friends are invited to help with a major wetland restoration project (see sidebar illustration for dates). Ducks Unlimited, Lower Trent Conservation Authority and the Species at Risk Farm Incentive Program are supporting an initiative to transform 2.8 hectares (seven acres) of environmentally protected wetland into the marsh it once was, as indicated on the 1819 Seymour Township survey maps. With good management, this marsh will become an extension of the provincially significant wetland surrounding the property.

The wetland restoration provides the opportunity for an Ontario

Invasive Plant Council demonstration project in how to control reed canary grass (*Phalaris arundinacea*), which has overtaken the area and turned it into a virtual dead zone devoid of biodiversity. Various strategies will be used, including shading out the invasive grass with a tree buffer, reducing nitrogen availability with native trees, shrubs and herbaceous plants that are nitrogen fixers such as buttonbush (*Cephalanthus occidentalis*), alders (*Alnus* spp.) and marsh vetchling (*Lathyrus palustris*), and outcompeting the reed grass by planting native grasses and sedges such as *Calamagrostis canadensis* (bluejoint or marsh reedgrass), *Glyceria striata* (fowl mannagrass) and *Carex muskingumensis* (palm sedge) with live



PHOTOGRAPH BY JANICE KEIL

Maidenhair fern (*Adiantum pedatum*)



PHOTOGRAPH BY JANICE KEIL

Wetland north of the barn in the fall.

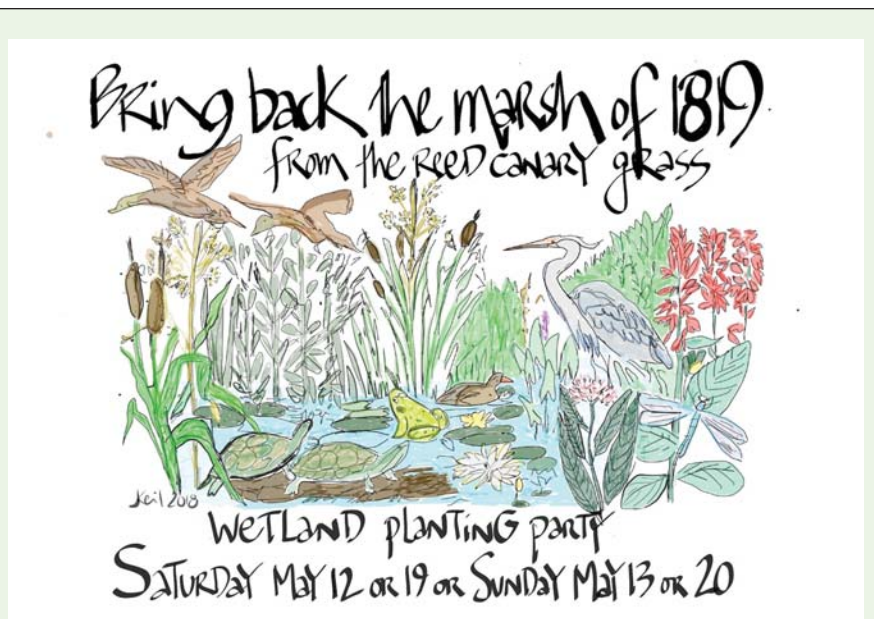
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willow stakes. The wetland restoration project is an opportunity for native plant lovers to meet with like-minded individuals and stewardship groups and plant hundreds of native trees, shrubs and grasses, leaving a timeless legacy.

These transformations all begin this spring and will continue over many years. It is my attempt to honour the gift of this land I have been given by returning it to some semblance of its pre-European contact state. We live in an uncertain era of climate change. We need to decide whether we are here to “improve or damn” our home planet, as Buffy St. Marie sings. I know my answer and there’s no time like now to start.

Janice Keil is a feminist geology fanatic living in Peterborough, Ontario. She has been a passionate director of the North American Native Plant Society for seven years.



If you're able to help with this historic project, please come on May 12, 13, 19 or 20 from 10 a.m. – 3 p.m. Come for one day or come for them all! Be sure to RSVP to jkeil@nanps.org for directions to the land. Bring rubber boots, a shovel (please wash it off before you come to keep out any potentially invasive seeds), lunch, a bottle of water and lots of good cheer!

PHOTOGRAPH BY MIRIAM HENRIQUES



Janice at her gate



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Poaching Endangers Wild Populations

by John Alexander

Between the 2nd and 10th of June, 2017, an individual or individuals illegally dug up a locally rare species of orchid from Flowerpot Island, a popular tourist spot in Fathom Five National Marine Park in Ontario. Parks Canada believes the large round-leaved orchid (*Plananthera orbiculata*) was targeted because of its rarity. Parks Canada staff had been studying this plant for over a decade. They asked for the public's assistance in

finding the perpetrator(s) but, to date, the crime has not been solved.

My partner Peter Kaellgren and I have been orchid enthusiasts and protectors since 2011. When we started our hobby, people who knew about the whereabouts of certain rare orchids were reluctant to divulge locations for fear of poaching by unprincipled collectors or unscrupulous sellers. I soon came to understand their reluctance, since they didn't know who we were and our credibility as enthusiasts and

photographers had not yet been established. As we spent more time in the field, we learned how pervasive a problem

poaching was.

Even though most of our native orchids are rare because of the unique habitats they inhabit, few are actually listed as at risk or threatened. Many are found in fragile environments and have specialized mycorrhizal relationships with fungi that must be present in the soil for the plants to survive. Conservationists walk a fine line: by encouraging people to get out and explore nature, we may risk damage to the very ecosystems we are trying to preserve. Provincial and federal park staff face this quandary every day. Without campers and day use patrons, parks would not receive the funding they need to exist. And yet, they must use the few resources they have to minimize the impact those same patrons have on delicate ecosystems.



PHOTOGRAPH BY JOHN ALEXANDER

Plananthera orbiculata blossom detail



PHOTOGRAPH BY JOHN ALEXANDER

Plananthera orbiculata leaves

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Poaching is, of course, not a new phenomenon. In *Our Wild Flowers – A Plea for Protection*, a publication from 1939, author Frank Morris of the Federation of Ontario Naturalists sounded the alarm. In his chapter on “Harming Our Wild Flowers”, he discussed the problems of picking and poaching, citing in particular lilies, orchids and trilliums – some of our showiest native plants – as the targets of people who did not know enough to leave the flowers alone. “We know of several districts where these beautiful flowers have been dug up from the acid soil of their northerly hemlock groves and granite slopes and planted by the hundreds in the gardens of a neighbouring limestone area; not a single plant has ever survived for more than a season.”

The authoritative *Orchids of Ontario* by RE Whiting and PM Catling, published almost five decades later in 1986, raised the same concerns. “A much greater threat to native orchids results from collecting them for the garden. Some nursery suppliers collect thousands of wild plants, including orchids, for sale to home gardeners. Many people, unaware of the very specific habitat requirements of most orchids, dig up plants in parks and on private land and take them home to their own gardens. There the orchids usually die, or at least fail to set seed in the absence of their natural pollinators. Orchids and other wild plants should be available for everyone to enjoy in the wild places where they have the best chance to survive and reproduce.”

With all of this concern, how can we fail to address this problem? Last year, for Canada’s 150th, did we miss an opportunity to educate park visitors by not hiring more park staff and biologists to do outreach about conservation? When we study the plant and animal kingdoms in school, do we talk about conservation and preservation at the same time? In our local field naturalist and horticultural societies do we encourage younger



PHOTOGRAPH BY JOHN ALEXANDER

Pitcher plants suffer from indiscriminate poaching resulting in extirpation from areas of Algonquin Park where they were once common.

participants to join, stressing conservation and preservation initiatives? Currently in England there are two orchid colonies under 24-hour surveillance so that the last remaining plants that were thought to be extirpated from that country can survive and, we hope, reproduce. Will it come to that here?

Humans often feel a desire to possess the rare and beautiful. What

some people fail to realize is that removing and attempting to possess wild plants is likely to be unsuccessful and will change the beautiful environment that enthralled them in the first place. Despite recent scientific research, we still don’t fully understand the relationships between plants and their particular environments – under the best of circumstances. Add climate change,



Michigan lily, another showy native plant, is also taken by gardeners from its natural habitat.

which appears to be altering bloom times, and the decline of significant pollinators to the mix and it becomes even more important that we not pick or poach our native beauties. I discovered at a presentation last year by the Nature Conservancy of Canada at Orchidfest in Tobermory, Ontario that picking and poaching are at the top of the list of threats to native species followed by trampling, invasive

species and habitat destruction. I was amazed that picking and poaching would be the number one threat when you consider the amount of habitat that is destroyed every year for development. Still, this fact reinforces the need to educate people – from an early age – about the (hopefully) unintentional havoc they create by removing our native plants. School curriculums could include more

information about conservation and the role that we can all play in protecting our environment.

Sadly, even in the classic 1868 publication of *Canadian Wildflowers* by Catherine Parr Trail, the author envisioned a time when our native orchids would become rare.

A time will come when these rare productions of our soil will disappear from among us, and can be found only on those waste and desolate places where the foot of civilized man can hardly penetrate; where the flowers of the wilderness flourish, bloom and decay unseen but by the all-seeing eye of Him who adorns the lonely places of the earth, filling them with beauty and fragrance.

What can you do? Be vigilant. Report poaching to the proper authorities. Educate fellow hikers and enthusiasts calmly and rationally. Lobby the government for better protection for endangered species and for larger and more secure conservation areas. As a gardener, buy native plants that are ethically grown or sourced through organizations such as the North American Native Plant Society. Embrace the naturalist's code cited in the Owen Sound Field Naturalists' *A Guide to the Orchids of Bruce and Grey Counties, Ontario*:

**Move nothing.
Step on nothing but the path.
Take nothing but photographs.
Leave nothing but your thanks!**

John Alexander is an experienced photographer who is documenting Canada's native orchids. This project has strengthened his interest in conservation and preservation.

Anyone with information about picking or poaching violations is asked to contact Parks Canada Dispatch at 1-877-852-3100. The removal of any flora from a national park is punishable by up to \$25,000 for a first offence.

New & Noted

The Humane Gardener: Nurturing a Backyard Habitat for Wildlife

By Nancy Lawson

2017: Princeton Architectural Press

Hardcover, 224 pages, 175 colour

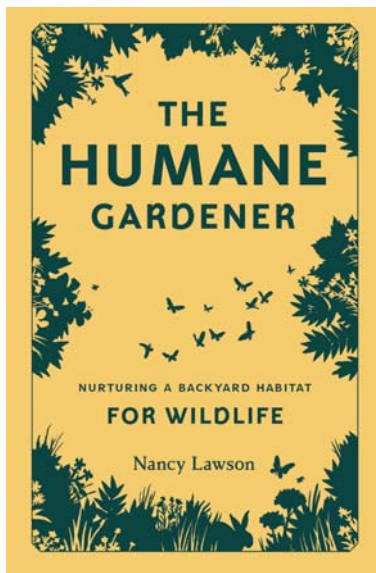
illustrations

ISBN: 9781616895549

The Humane Gardener is a dreamy book with ribs of steel. Evoking native plants by colour and fragrance, as the author Nancy Lawson does, conveys a palpable sense of beauty. But when describing cruelty to wildlife, Lawson doesn't mince words. "People still shoot opossums because they don't like their appearance. They pour gasoline down mole holes, set body-gripping traps for groundhogs, and trap and relocate animals in unfamiliar territories, often to their inevitable doom." Lawson supplies context, noting that the "nuisance" wildlife control operators that homeowners hire are "part of a multibillion-dollar industry that prioritizes profit over animal welfare." With "little incentive to address the real sources of conflict," this industry preys "on a lack of customer knowledge about urban ecology." One of this book's key achievements is helping readers overcome this knowledge gap.

The "cultural biases" that fuel the way large communities respond to wildlife often "influence the decisions we make in our own homes and gardens." Lawson attributes these decisions to "a widespread disconnection from the natural world" which is "fueled by fear mongering by the 'pest'-control industry." The resulting fear obscures "the many effective ways of coexisting with the creatures in our midst. The results can be tragic for animals just trying to survive."

"Making the world safer for animals isn't just the purview of wildlife rescuers; it's the responsibility of everyone with a patch of grass and a conscience," observes Lawson. This



includes well-intentioned native plant gardeners "who grow milkweed solely for butterflies and tend to regard other visitors as intruders." Those other visitors include milkweed bugs and beetles that have happily co-existed with monarch butterflies on milkweed (*Asclepias* spp.) for centuries. Entomologists will tell you that the presence of the bugs will not prevent the monarchs from laying their eggs. Rather than be killers of colourful native insects, Lawson encourages us



to be humane gardeners whose benevolent observation of the ancient milkweed ecosystem provides ecological insight and knowledge.

Lawson is realistic about the big picture. She cites factors that influence wildlife management programs that go beyond science and references the "money trail" that extends from the target animal to community profits. She mentions an intriguing paradox that brings to mind the books *1984* and *Alice in Wonderland*. History is

being rewritten and distorted by people such as "those who advocated twenty years ago for expanded deer hunts based on lack of natural controls [who] have changed their tune: now that coyotes and mountain lions are ready and willing to take on the job of apex predators, some hunters and government officials have argued they won't leave enough deer for humans to kill."

The Humane Gardener provides lots of practical, how-to native gardening information in addition to its powerful and much needed ethical and philosophical messages. Chapters discuss helping wildlife avoid hidden hazards, planting native plant-dominated yards, creating bird, bee and butterfly-friendly yards, and expanding landscape plans to incorporate snags as trees for wildlife. The book profiles humane gardeners throughout the United States and Canada (including me, I'm pleased to say).

I made interesting discoveries as I read this incredibly informative book. For example, the glossy berries of the beautiful but much maligned pokeweed (*Phytolacca americana*), which I've taken to calling pokeberry, provide fall-migrating birds with exceptionally nutritious food.

Many homeowners conduct thorough clean-ups of their yards in spring and fall, a routine they may be hard-pressed to give up, but one that destroys hidden pollinators and deprives birds of food. With her eloquent and engaging plea, Lawson makes the important case for compassionate treatment of the backyard wildlife with which we share our increasingly diminishing natural world.

Review by Charlotte Adelman, co-author of The Midwestern Native Garden; Midwestern Native Shrubs and Trees and Prairie Directory of North America, and author of WBAI 75.

Native Plants: Promoting Engagement and Excitement

by Rob Messervey and Karen Abrahams

As we write this in January, the temperature is -24 C (11 F). The only creatures visible outside our windows are the woodpeckers, juncos, cardinals and nuthatches at our bird feeders and squirrels, hares and foxes scurrying across the snow. By the time this is published we'll be well into spring and memories of cold, white winter days will be long past as we watch our native plant nursery in Claremont, Ontario come alive again in every imaginable shade of green.

Our work involves not just growing and selling native plants, but becoming actively engaged in our community, contributing to conservation efforts and helping to educate people near and far.

Contributing Near and Far

When we think of native plants and their benefit to the environment, most of us think locally. This is important, of course, but think about the benefits our collective local efforts to plant and preserve native plants and ecosystems can have on a much larger scale. Our small nursery is doing just that, contributing to conservation of species in Mexico and the United States.

One example is the plight of the monarch butterfly. To reverse population declines – which have been attributed in part to the reduced presence of their host plant, milkweed (*Asclepias* spp.), and related habitat loss – and to support the long-term viability of the monarch, Canada, Mexico and the USA have committed to a tri-national conservation effort. As noted in the 2017 report *Creating and Restoring Habitat for Monarchs* prepared by Pollinator Partnership Canada for Environment and Climate Change Canada, between 10% and 15% of the North American breeding population of the monarch is found in Canada. Research suggests that the best conservation strategy for ensuring



Monarch butterfly on lance-leaved coreopsis (*Coreopsis lanceolata*)

long-term population viability is to protect and restore habitat across the butterfly's breeding ranges. The report also notes that multiple, smaller-scale, community-level plantings contribute far more to the monarch species' survival than focusing on larger planting schemes at a regional scale. All this reinforces the importance of planting native plants, finding partners to provide planting sites of all sizes, and monitoring successes and challenges.

Our nursery, Native Plants in Claremont (NPIC), is pleased to play a role with other nurseries and partner organizations in supporting this conservation imperative. We supply plants to municipalities, conservation authorities, garden centres, local horticultural associations, organizations such as Ontario Nature and 10,000 Trees for the Rouge, landscape contractors, First Nations communities, schools and school boards, residential and cottage property owners and others.

We feel that we need to work together in partnership to be effective in our business. For instance, the *Creating and Restoring Habitat for Monarchs* report notes that while

native plant nurseries in Ontario and Quebec have "significant capacity" to supply milkweed plants and nectar-producing plants to re-establish monarch breeding grounds, demand often exceeds supply, especially for major projects such as planting in rights of way, linear parks and wildlife corridors. We, in the industry, need to collaborate on an ongoing basis with the project leaders to anticipate planting needs on a multi-year basis to supply these major initiatives.

Contributing Through a Local Partnership Project

NPIC was involved with a very successful garden project at Centennial College in Scarborough last year. Mike Gauthier, Professor of Applied Biological and Environmental Sciences, conceived the idea of a native plant garden for a heavily travelled boulevard as part of the environmental course curriculum. He brought his students out to the nursery to expose them to the world of native plants and to discuss design and plant selection options. Our garden designer, Katherine, helped with a detailed design which incorporated innovative perspectives that came from the students and professor.

The site, which was 26 metres (85 feet) long by 6 metres (20 feet) wide, had heavily compacted soil. At the drier, sunnier south end, the students planned to build a bee house, so we focused on plants that were drought tolerant as well as attractive to bees, including butterfly milkweed (*Asclepias tuberosa*), anise hyssop (*Agastache foeniculum*) and lance-leaved coreopsis (*Coreopsis lanceolata*). The north end of the site was shaded by a building and trees. It was subject to runoff during heavy rains. We created a depression to help conserve the water and planted pollinator-friendly plants that thrived in moist shade, including the unusual-looking buttonbush (*Cephalanthus*

PHOTOGRAPH COURTESY NATIVE PLANTS IN CLAREMONT

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PHOTOGRAPH COURTESY ENVIRONMENT SOCIETY CENTENNIAL COLLEGE

Centennial College garden planting completed

occidentalis), great blue lobelia (*Lobelia siphilitica*) and larger blue flag iris (*Iris versicolor*). Wild savory (*Calamintha arkansanum*) and small pussytoes (*Antennaria howelli*) were the charming groundcovers introduced throughout the site.

The students took a leadership role in site preparation, species selection and the final planting plan. Boy, were they keen! Our biggest challenge turned out to be unloading our trays of plants and shrubs on Morningside Drive during morning rush hour! We undertook a two-phased planting process involving two classes of students. The results have been spectacular. The students prepared a maintenance plan which they are now implementing. It includes watering, weeding, road salt control measures and minimizing impact from foot traffic through the site. The students

are excited about the project; they own it!

Promoting Sustainable Practices

We treat fungus, mildew and pests on our plants using biologically friendly applications of praying mantis, lace wings, ladybugs, insecticidal soaps and Safers' Defender Garden Fungicide. Hand removal of pests is a much-loved activity among our staff!

Our first experiment with ladybugs (a North American native species, known as the convergent lady beetle) turned into an exciting adventure. The little creatures arrived packed in a Styrofoam box with foam refrigerant bags. On opening the package, we peered in amazement as hundreds of ladybugs awakened, anticipating freedom. Dozens crawled up Rob's

arms. Out to the planting areas we flew, gently cradling our treasures just as it started to rain. Could we release them or would they drown? After some debate we decided to release them, rain or no rain, and carefully placed them on some of our aphid-susceptible plants such as milkweeds, panicled aster (*Symphyotrichum lanceolatum*) and false sunflower (*Heliopsis helianthoides*). We took turns running from species to species. Our ladybugs knew what to do, spreading out, finding cover under leaves and flower heads, getting cozy. The next day we saw signs of success – ladybugs happily camped on our plants...and fewer aphids.

To further promote sustainable practices, we recycle plastic pots and trays through a local garden centre. Wooden skids that arrive with deliveries of soil become tables and

wall planters! Some of our design ideas came from California.

We also adhere to the Guidelines for Commercial Native Plant Growers produced by the North American Native Plant Society for sustainable seed collection. When we collect seeds from the wild, we do so with caution, collecting less than 10% of the total in any location. In the interests of preserving genetic diversity, we propagate primarily by seed. Where vegetative reproduction (cloning) is used, we let customers know. No plants are taken from the wild except in the case of rescue operations where the plants would have otherwise been destroyed.

Education

We always enjoy the opportunity to host enthusiastic groups. Our tours link native plants and their habitats to related environmental imperatives and activities. We have hosted municipal government staff, conservation authorities, horticultural associations, youth summit participants and government-sponsored groups of New Canadians from around the world interested in horticulture. Our nursery speaks to them in a universal language!

During our tours, we talk about our collaboration with Trout Unlimited. As part of the fish habitat enhancement work done on a major section of the East Duffins Creek on our property, debris dams were removed and utilized to control bank erosion, and pools and riffles were created to facilitate fish migration and spawning. We explain our bee box designed for solitary bees. Plants at the site include delicate mauve wild bergamot (*Monarda fistulosa*), hoary vervain (*Verbena stricta*), sunny golden Alexander (*Zizia aurea*), false sunflower (*Heliopsis helianthoides*), obedient plant (*Physostegia virginiana*), the prolific heath aster (*Symphotrichum ericoides*) and Saskatoon serviceberry (*Amelanchier alnifolia*), which produces lots of fruit



PHOTOGRAPH COURTESY NATIVE PLANTS IN CLAREMONT

*The Triangular Garden at NPIC enables customers to visualize perennials in their own garden at maturity. Species shown include compass plant (*Silphium laciniatum*) in the centre of the picture, red-flowered beebalm (*Monarda didyma*), mauve-flowered wild bergamot (*Monarda fistulosa*), pale purple coneflower (*Echinacea pallida*), yellow-flowered false sunflower (*Heliopsis helianthoides*) and lance-leaved coreopsis (*Coreopsis lanceolata*).*

for wildlife. This is a partnership project with Dunbarton High School and Toronto and Region Conservation Authority. We also discuss the contributions that native plants make to helping meet the restoration and stewardship objectives of the Oak Ridges Moraine and Greenbelt Plan.

If tour participants have time, we invite them to take part in some hands-on planting activities. We get a

lot of our transplanting done this way and then enjoy refreshments! One of our tours in 2017 was co-sponsored by EcoSpark and Dunbarton High School as part of their Greenbelt Youth Tour. Over 30 students and their teachers helped us transplant butterfly milkweeds and learned all about them. The defining moment came when we

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all squeezed into our barn/office and asked our student staff members (Lauren is enrolled in the Ecological

interested groups also takes the form of presentations, use of social media and direct training. Karen participated

in the David Suzuki Foundation Butterflyway Ranger Training to prepare the Rangers for planting projects in Markham. Rob recently presented to the Lake Simcoe Region Conservation Authority staff at their quarterly Lunch 'n Learn and to aspiring teachers at the University of Ontario Institute of Technology environmental education day.

It's rewarding for our company to participate in events where native plants are an important theme, whether it be the Suzuki Foundation Fall Butterflyway Parade at Kew Beach or the Tommy Thompson Park Spring Bird Festival in Toronto. It's all part of our effort to contribute to the conservation cause. Collectively we can make a huge difference.

Rob Messervey and Karen Abrahams are the owners of Native Plants in Claremont. NPIC was honoured with NANPS' 2017 Richard Woolger Cultivation Award.

College student staff at NPIC describe the bee/pollinator garden to a group of New Canadian horticulturalists from Durham.

Restoration Program at Fleming College, Madolyn at the University of Guelph in Landscape Architecture and Richard, a recent graduate from the University of Waterloo in Environmental Science/Business) talk about their experiences working at the nursery, how their work was tied to their areas of study and how it prepared them for future job opportunities. Nothing like hearing it from your peers!

Sharing our knowledge about native plants and conservation issues with



Karen Abrahams, owner of Native Plants in Claremont nursery with her glorious plants.

PHOTOGRAPH BY NATIVE PLANTS IN CLAREMONT

PHOTOGRAPH BY LANDSCAPE ONTARIO

moist beneath a cover of decomposing leaf litter. They don't like wet feet, so soggy ground won't work. Dragons grow in similar habitats in the forests throughout eastern North America. Hills are not a requirement, but they do need shade and moisture.

Arisaema dracontium is a perennial that grows from a corm. In many ways, the green dragon is very much like its "relative" Jack-in-the-pulpit (*Arisaema triphyllum*). The main difference lies in the leaf. Green dragon grows one to two feet (one-third to half a metre) high. It has a single unbranched stem and a single leaf on the top. Although the leaf looks like two leaves, it is only one. The leaf is divided into two halves, each with several leaflets that hang over the fruiting stem like flattened, flappy, horseshoe-shaped umbrellas. The flower spathe is borne on a separate unbranching stem rising from the same tuberous root.

Dragons bloom in mid-spring, but the flowers are wrapped inside a spathe, similar to a Jack-in-the-pulpit. The long, curving tip of the upward-reaching spadix is eye-catching. This part – which resembles a green serpent's tongue – gives the plant its common name.

Late in summer and into the fall, the leaves of the plant die back. The flower stalk remains standing, but is now a

cluster of bright red berries. Without the leaves, it is nearly impossible to tell the difference between the dragon and the Jack. They belong to the same genus.

Just like the Jack-in-the-pulpit, the entire green dragon plant contains calcium oxalate crystals. Out here in the rural hills, local boys will sometimes dare newcomer boys to eat the raw root of the Jack-in-the-pulpit. My son, who didn't fall for the trick, said the kids who tried it told him it felt like razor blades in your mouth and throat. My guess is that the raw root of green dragon would have the same terrifying effect. That said, a thoroughly cooked root is edible (and somewhat starchy) with the oxalate crystals deactivated. But who's willing to taste it first to see if it's done?

The Menominee tribe in Wisconsin is said to have used this plant as medicine (although we don't know in what way) and for rituals to bring on the second sight during dreams.

I don't use dragons for anything except as much-admired subjects for my art and photography. The habitat they frequent is my favourite kind of place to explore and it gives me great joy to encounter these rare plants when I'm out in the deep woods.

If you wish to grow *Arisaema*

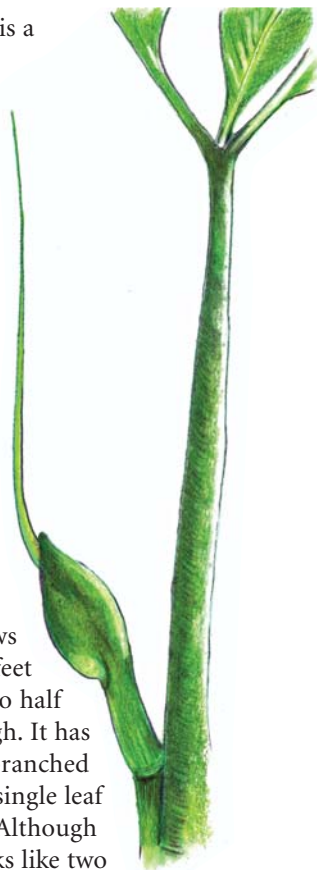
dracontium in your garden, look for berries that are ripe and falling from the stalk. At this point, they're ready to plant. Some internet resources advise taking the seeds out of the pulp

and keeping them in the refrigerator to stratify. If you do this, be sure to wear gloves. The berries also have calcium oxalate crystals which will burn if they get under your nails. I've successfully raised new dragons just by filling pots with a light organic soil that won't compress too much and burying the berries about an inch deep to experience the winter naturally. I put the pots in the ground about halfway and cover them well with leaf litter to mimic a natural habitat. It can take two years to see sprouting, but I've had them sprout the first spring after planting. I'm not sure what determines whether they need a full year of stratifying, but perhaps the one season that year provided enough cold and warm temperature fluctuations.

If given enough shade, moisture and protection from wind, green dragons will perform in gardens where other shade-loving plants such as ferns grow.

Madison Woods lives on 160 acres (65 hectares) in the remote Ozarks of northwest Arkansas. She's an author, artist and nature farmer. You can get prints of her artwork and find out more about what it means to be a nature farmer at WildOzark.com.

ILLUSTRATION BY MADISON WOODS



Green dragon in a garden setting.

PHOTOGRAPH BY BEN PORCHUK



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