The Blazing Star

Summer 2019, Volume 20, Issue 3

A Publication of the North American Native Plant Society

Native Plant to Know

Round-Headed Bush Clover

Lespedeza capitata

by Benjamin Vogt

The ideal time to walk a meadow or prairie is at sunrise in early to mid-fall. There's no debate about this, not when you're fascinated by seed heads. Throughout the summer, I walk by the same plant time and again, admiring it in full flower and forming a relationship with it; a *Liatris* (blazing star) or *Vernonia* (ironweed) or *Asclepias* (milkweed) in the place I expect it to be is reassuring, like meeting an old friend for coffee and picking up where we left off months ago. Together we change as the season progresses and, while we appear different – less attractive in some ways, more so in others – it's the details of who we are and how we interact with others that define our beauty and purpose.

That's why I rise before dawn in September to meet my old friend *Lespedeza capitata* (round-headed bush clover). It's not flagrantly showy like a *Liatris*, nor does it give off a vanilla-spice scent like an *Asclepias* to help you track it down. No, the flowers of *Lespedeza* are so inconspicuous, its slender form so well camouflaged by its close neighbours little bluestem (*Schizachyrium scoparium*) and big bluestem (*Andropogon gerardii*), that you have to look carefully to find it. When autumn hits, the dark copper seed heads resemble an upside-down exclamation mark. As I kneel before it, the dew on its stout brown puffs appear like diamonds flecked onto some decadent chocolate confection, catching the first light in a refraction one might see on an abandoned spider web.

Round-headed bush clover is rarely used in gardens. In fertile soil it simply gets too tall and flops over, but in a competitive bed or prairie, it'll grow two to three feet (about a metre) tall. The unbranched stems have alternate leaves coated in super fine hairs that give *L. capitata* a blue-grey tint in the right light. Each leaf is no more than one to two inches (25-50 millimetres) long and 1/2 inch (12 millimetres) wide, a nearly smooth oval that puddles rain for visiting insects.

The flowers appear in mid- to late summer, each one barely 1/4 inch (six millimetres) long with five white petals and a magenta streak on the throat. You have to get very close to see the bloom, which makes it all the more exciting. Short-tongued insects pollinate the flowers, though you see the occasional butterfly gathering nectar. *L. capitata* is a larval host to several species of butterfly, including the hoary edge skipper, silver-spotted skipper, southern cloudywing and northern cloudywing. Since it's high in

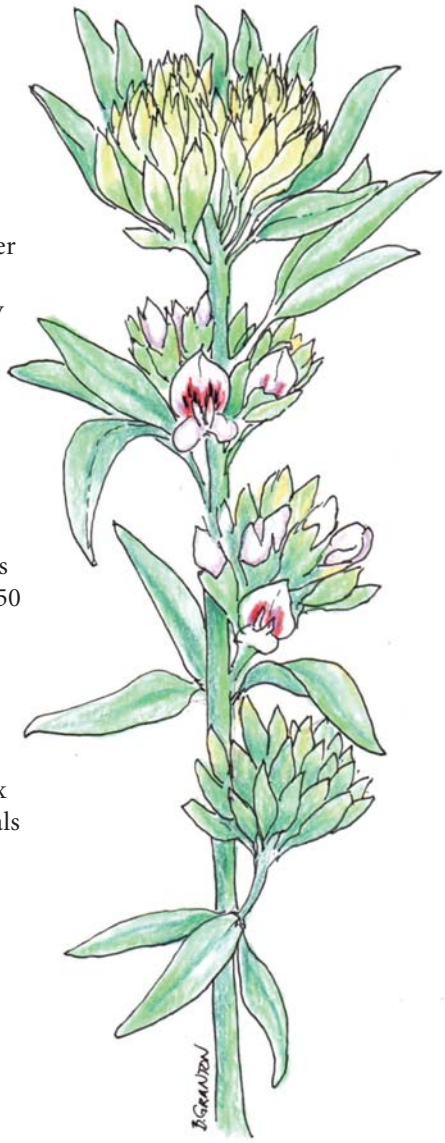

ILLUSTRATION BY BRIGITTE GRANTON

Continued on page 15

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

The Blazing Star is published quarterly (April, August, November, February) by the North American Native Plant Society (NANPS). Contact editor@nanps.org for editorial deadlines and for advertising rates. The views expressed herein are those of the authors and not necessarily those of NANPS.
The North American Native Plant Society is dedicated to the study, conservation, cultivation and restoration of North America's native flora.

Summer 2019
Volume 20, Issue 3
ISSN 2291-8280

Editor: Irene Fedun
Production: Bea Paterson
Proofreader: Vicki Soon-Ai Low
Printed by: Guild Printing, Markham, Ontario

North American Native Plant Society, formerly Canadian Wildflower Society, is a registered charitable society, no. 130720824 RR0001.
Donations to the society are tax-creditable in Canada.

NANPS Membership:
CAN$25/YEAR WITHIN CANADA,
US$25/YEAR OUTSIDE CANADA

Join online or send cheque or money order to North American Native Plant Society, Box 69070, St. Clair P.O., Toronto, Ontario, Canada M4T 3A1.
E-mail: **info@nanps.org**
Web: **nanps.org**.
Facebook: **facebook.com/nativeplant**
Twitter: **@tnanps**
Instagram: **instagram.com/nativeplant_society/**

EVENTS

NANPS 2019
AGM & SOCIAL
Saturday, October 26, 2019
Toronto Botanical Garden
777 Lawrence Ave East,
Toronto, Ontario
Visit nanps.org for details.

NATURAL DESIGN
September 5-6, 2019
Cape May, New Jersey
This intensive, interactive two-day workshop will provide concrete, real-world guidance for designing and documenting all phases of native landscape development. Instructors: Larry Weaner, FAPLD, Ian Caton, LD & Ethan Dropkin, MLA. For detailed program information, visit bit.ly/NDAL_Brochure.

TORONTO BOTANICAL GARDEN'S URBAN TREE WORKSHOP: HOW TO GROW YOUR OWN FOREST FROM LOCAL SEED
October 11, 2019
9:30 a.m. – 3:30 p.m.
777 Lawrence Ave E. Toronto, Ontario
Visit torontobotanicalgarden.ca to register.

PHOTOGRAPH BY WALTER J. TEMPLET

Iris virginica *(blue flag iris), a species that ranges from Florida north to eastern Canada*

PHOTOGRAPH BY LARRY WEANER

A seeded meadow by Larry Weaner Landscape Associates in Sharon, Connecticut transforms former agricultural lands into rich habitat for meadow and grassland wildlife.

TORONTO BOTANICAL GARDEN URBAN RAVINE SYMPOSIUM
October 10, 2019
8:30 a.m. – 4:30 p.m.
777 Lawrence Ave East, Toronto, Ontario
Visit torontobotanicalgarden.ca to register.

E-mail volunteer@nanps.org if you are interested in volunteering at NANPS events or just want to learn more.

IN THIS ISSUE OF *THE BLAZING STAR*

PHOTOGRAPH BY GRAHAM PAGE

*Virginia meadow beauty (*Rhexia virginica*) is one of the thousands of plants whose seeds Kristl Walek collected for sale through her long-time seed business Gardens North. Read her fascinating story* **on page 4**.

PHOTOGRAPH BY KAREN CARILLO

*Karen Carillo shares some of her favourite recipes that use native plants, starting on page 8. These violet leaves (*Viola *sp.) were picked for use in a tincture* **on page 8.**

PHOTOGRAPH COURTESY CENTER FOR SUSTAINABLE LANDSCAPES AND COMMUNITIES

Colorado University-Boulder Center for Sustainable Landscapes and Communities partnered with several local organizations to lead field trips for the purpose of showing the public what a healthy forest should look like. Read the article by Suzanne Dingwell, Restoration and the New Ecology, ***on page 11.***

Educational Website Grows From Gardens North

by Dilys Bowman

As a child in southern Germany, Kristl Walek loved to wander in the woods searching for plants, but her wanderings nearly ended in disaster one April morning. She had gone into the Black Forest to collect wild lily of the valley (*Convallaria majalis*) for her mother's birthday. "I caught sight of a large tusked wild boar," she says "and it charged. Agility was everything that morning!" Walek shimmied up a tree to escape the boar, but was stuck there for hours. Men from the village finally found her as it got dark. Astonishingly, this did not kill her love of the wild.

An inveterate gardener and ardent plant hunter, Walek ran a perennial seed business, Gardens North, in Canada for nearly 30 years. She offered an amazing variety of exotic and, increasingly, native seed for hardy herbaceous and woody plants. At the end of 2018, deferring to arthritis, she retired and closed the business. Fortunately for us, she has poured her decades of experience into an educational website, **wildplantsfromseed.com**, about how to propagate native plants from seed, which will be live by the end of 2019.

Gardens North came about almost by chance. In the mid-1980s, Walek was a young, married litigation lawyer in Ottawa. She was good at her job, but felt increasingly uninspired. An unexpected pregnancy offered a reprieve: she was granted a three-month leave of absence from her work. Then she asked for and was given another and then another. After almost a year, the law firm called her to say that work was piling up in the office and they needed to know if and when she'd be coming back. It was an easy decision: the law lost and gardening won out.

Walek blissfully divided her time between childcare and her "manic obsession," as she once described it, creating a gorgeous and unusual garden using plants she had grown largely from seed, foreign and native. The beauty and variety of her garden continually drew visitors and eventually led to a live interview in her garden with fellow gardener and CBC radio host Peter Gzowski. At the end of the interview he asked her what her dream of dreams was, what she saw in her future. She blurted, "Oh, maybe I'll open a seed business!" Almost immediately, the CBC's phones began ringing as gardeners besieged the radio station with requests for Walek's seed catalogue, "which, of course, did not exist."

But the idea started percolating. In 1992 she issued her first catalogue, with 263 species, 27 of them native, and all from her garden. It was excellent timing: hers was the only Canadian seed company to specialize in hardy perennial (and, by 1997, woody) seed for northern gardeners. Business boomed – by 1995, she was growing 1,600 species. Within a few years, she relocated to – and transformed – four hectares (10 acres) outside Ottawa. Her then-husband Eddie Roderique left his job as a computer scientist soon after the move and joined her in the company. His help was much needed: they were running a nursery on three landscaped hectares (seven acres) in the summer, collecting seed almost half the year, testing and cleaning it, and producing the seed catalogue in the fall, a huge task made vastly easier when they eventually went fully online. She also collected for seed companies and

PHOTOGRAPH BY KRISTL WALEK

Kristl collecting Vaccinium vitis-idaea *(lingonberry) seed on Brier Island, Nova Scotia*

Photograph by Graham Page

Epigaea repens *(trailing arbutus) seed embedded in the berries*

arboreta.

Walek discovered early on that her customers for native North American seed were mostly people on other continents, particularly in northern Europe. North Americans developed a zeal for native plants only in the last five years, according to Walek. Northern Europeans, she says, "were very excited by me, because there was nobody else in the world who was selling cold-hardy stuff. And particularly the woody species were of major, major interest. That started my own very fast learning curve. I had to tell people how to grow this stuff; there really wasn't any information out there on the germination part. And I discovered that was the thing that I loved most about [the business]."

Walek had an epiphany on the 8,000-kilometre (5,000-mile) drive back from a 1997 collecting trip to Alberta: "Why do I have relatively few natives from the Canadian northeast in my catalogue?" She thought about forest and meadow plants, the beautiful and tough groundcovers in the woods, the grasses and sedges. She began to collect and sell more and more native seed. In 2018, her last year of business, Gardens North offered 827 native North American species.

The nursery work was often arduous, and Walek was happy to accept volunteer help in exchange for plants. One day an older man showed up. Over lunch she discovered that Graham Page was a recently retired forester who loved snooping around in the wild. Walek soon realized that she had the perfect person: not only was he happy to share his seed-collecting spots with her, but also his knowledge of trees, "my weakness." Walek and Page developed a true and enduring botanical partnership. Like the early collectors, they both are driven by a passion for wild, new landscapes and plants. But unlike most of the early collectors, they collect only seed and they do so sustainably. "As soon as we hear about [a rare native plant sighting], we have to find it. I think we have this old hunter's urge in both of us, we both have it in equal measure," says Walek. "And we're very good [at finding plants]."

Today, as in the 1700s, plant hunting has its hazards and disappointments. Walek has many stories to tell, like the terrifying day she made one false step while botanizing in a bog and fell in. "Had Graham not been with me that day to haul me out, I might have been a missing seed collector," she says. Then there was the great skunk cabbage hunt. It took two years of

Photograph by Graham Page

*Greater fringed gentian (*Gentianopsis crinita*)*

Continued on page 6

Continued from page 5

diligent searching for *Symplocarpus foetidus* before they found a suitably large colony in the Ottawa Valley. When they finally found it, "we laughed and laughed and laughed." As they drove along the back road, the odometer recorded a stretch of 1.7 kilometres (over a mile) of skunk cabbage woods!

The botanical partnership works well for the new website that Walek and Page have created.

PHOTOGRAPH BY GRAHAM PAGE

Trillium cernuum *(nodding trillium) seeds*

PHOTOGRAPH BY GRAHAM PAGE

Green spore from Osmunda regalis *(royal fern)*

She describes it as "the first website specifically devoted to the propagation of native plants of eastern Canada from seed. This includes specific visual identification of seed, collection and cleaning instructions and detailed information on their particular germination protocols." Photographs, taken by Page, show each plant in its natural habitat at various stages, including close-ups of the flower and the seed when it's ripe. The website gives a rough estimate of when the seed should be ready for collecting, what to look for and what the pitfalls might be. It explains how to clean the seed and how to germinate it. Information is provided for perennial herbaceous plants, ferns and woody plants.

Two ideas that greatly expanded Walek's knowledge of germination came from books by chemist and horticulturist Norman Deno. The first was his statement that there are seeds "that are short-lived, that are ephemeral, and there might be some way that we're not thinking of yet to [extend their viability for germination]." He suggested that most seed houses around the world were selling such seed "dead on arrival." Walek had already been trying out moist-packed seed when she read this. "I was the first one anywhere in the world [to sell seeds moist-packed]. And this is what I am the most proud of…it's so easy to deal with [ephemeral seed] once you know."

Deno also asserted that simple fungi and other extraneous matter will not kill healthy seed. Walek applied this idea to bunchberry (*Cornus canadensis*), the seed of which is almost impossible to separate from the berry. She put the berries in a Ziploc® bag with moist vermiculite and left them to rot for months, occasionally opening the bag for airing, until only the seed remained. She achieved close to 100% germination after one cold stratification treatment.

Wildplantsfromseed.com includes many horticulturally significant native

species "because those were the ones most in danger in the wild." Walek knows this well: she carefully collected seeds from a thriving colony of wild leek (*Allium tricoccum*) in a spot near Ottawa for over a decade. A few years later, Page went to take photographs and it was empty. "All the alliums were gone and this was a large area. And they [the people who allegedly took all the plants] left all their garbage behind too." Walek notes that wild leek, because of its long growth cycle, cannot be sustainably harvested. She no longer eats it.

For gardeners who want to collect seeds from native plants in the wild, the website gives them the tools needed to propagate their own plants successfully in a responsible manner. For Walek, now living in Brockville, Ontario, the website marks a new path: "Something is brewing in my life for the next little while – partly to do with the new website. I don't know; even my arthritis feels better." Although she no longer sells seeds, **wildplantsfromseed.com** will build on her Gardens North success. It's a fitting legacy.

***Dilys Bowman**, NANPS secretary, was led to native plants by a volunteer gig with the Toronto and Region Conservation Authority. She now gardens in Toronto after years in the United States.*

NOTE ABOUT INVASIVENESS

Walek notes that all plants have potential for invasiveness depending on where they are planted; many of the most serious invasives in her own garden are native plants. For Gardens North, she researched each plant and chose not to carry seeds if she knew the plant had invasive potential. Black locust (*Robinia pseudoacacia*) is one such example native to the eastern United States. She points out that invasiveness takes different forms. Berries favoured by birds can carry seed far afield. Common milkweed (*Asclepias syriaca*), an important monarch butterfly plant, can spread aggressively by sending its seeds parachuting in the wind. "One has to be conscious of what one is planting in every case," says Walek, "and its effect on wildlife and its ability to spread into the wild."

PHOTOGRAPH BY GRAHAM PAGE

Myrica pensylvanica *(northern bayberry) seed*

PHOTOGRAPH BY GRAHAM PAGE

Arisaema triphyllum *(Jack in the pulpit) seed pods. Seed enclosed in fruit contains germination inhibitors and requires washing before it is sown.*

Eat Your Native Plants: They're Good for You!

by Karen Carillo

A few years back, my brother asked me how to get rid of the violets on his large front lawn. They were scattered everywhere and drove him and his wife nuts. They wanted pristine grass under their fruit trees. "Ha!" I thought, "there is no such thing, my friend, not without back-breaking labour or toxic spray!" Why would he want to eradicate the violets, anyway? They are not bothered by light foot traffic – these plants were obviously thriving despite kids running around and playing on them. What's more, they are early bloomers, one of the first to welcome us into spring with rich colour. They don't even have the slightly shabby look of typical "weeds," but are robust and beautiful!

I gently mentioned to my brother that violet flowers and leaves are edible, highly nutritious and look stunning in a salad. "You can impress your friends and family at no cost!" Many people buy flowers in salad mixes at high-end stores at exorbitant prices and here he had them free. I also shared with him a super-fun science trick that would wow his kids with its magical colour changes (see below). Slowly he came around to the idea of leaving them, and now he calls me over in the spring to pick them for "potions" before the kids trample them.

Most people care about the state of their health and that of their loved ones, but protecting nature may not be at the top of their list of priorities. Teaching them to use native plants as food or as a boon to their health can lead them to a more sustainable way of living. Countless native plants are edible and/or medicinal. I encourage you to choose a couple of native plants, learn everything you can about them, then expand your repertoire. Trying to learn about too many plants at once can be overwhelming. I have chosen a few easy-to-find, easy-to-use plants that may just lead you on a journey towards delicious, native plant-based meals.

Violets (*Viola* spp.)

Violet flowers make any dish look more polished and attractive. Their mild flavour mingles well with just about anything. The leaves are great cut up in salads, they can thicken soups, and can be sautéed or cooked like spinach (for example, in an omelette). Like other early spring plants, violet flowers and leaves are considered blood purifiers and detoxifiers. Violets are mucilaginous, meaning they soothe the respiratory system and help get rid of stuck phlegm. They are rich in Vitamin A (more than spinach) and Vitamin C. Violet flower tea has been used medicinally to help with bronchitis, asthma, heart palpitations and fevers. It can be used as a gargle or syrup to help relieve sore throats and coughs. The flowers also make great food colouring for vinegars, jellies, syrups and preserves.

With a little science and a few ingredients you can turn sweet little violet flowers into a vivid magenta tea!

**** Pick a cup worth of violet flowers. Pour a cup of boiling water over them and let sit for 12 hours. This produces an enchanting blue liquid. Slowly add a bit of lemon juice and watch it turn a ridiculous shade of bright magenta. I'll let you look up the science behind this, which is pretty neat. Add a sweetener of your choice and some ice cubes for a refreshingly relaxing lemonade tea. Your kids will drink it up! ****

Elder (*Sambucus* spp.)

Elderberry's traditional charm stems from its powerful ability to heal. Both the flowers and berries have medicinal qualities. Scientific research has shown elderberry extract to be an effective treatment for pesky colds. If you take a large dose as soon as you feel a cold coming on, a cold episode could be cut down by more than half. Like most berries, elderberries have few calories and are packed with nutrition, potassium, beta carotene, calcium, phosphorus and vitamin C. Ripe elderberries are deep purple-black. Avoid unripe berries as they will make you sick. You can trim elderberry bushes to fit your garden design much as you would an ornamental bonsai or even a standard. I prefer to let them go their own way and only prune to promote air flow. A few months ago, my husband and I had the pleasure of helping a Toronto-based non-profit organization called LEAF (Local Enhancement and Appreciation of Forests, **yourleaf.org**) trim weeds and mulch around the trees at Wychwood Park. As a thank you, they gave us a mini common elder, which is now in a spacious pot in my garden and has

PHOTOGRAPHS BY KAREN CARILLO

shown its thanks with two beautiful flower clusters. Elderberry is a favourite among herbalists because it's sweet and delicious, and their clients are happy to take it. Because of its appeal, there are plenty of recipes for elderflower tea, wine, vinegar, cakes, jams, tinctures, syrups and elixirs. Here's a super-easy savoury recipe:

❊ ***Take some of the flowers and dip them in a light tempura or pancake-like batter. Saute until crispy brown. Sprinkle a little flaked salt over top. Delightful!*** ❊

Wild Rose (*Rosa* spp.)

Rose hips are rich in vitamins A, B, E and K and are one of the best sources of vitamin C and bioflavonoids. They can survive on the bush all winter so they're available to pick when most foods are long gone. Hips can be eaten fresh or dried and are used mainly in super-tasty teas. The tastiest rose hips are the largest, tasting like persimmons or apricots. Scoop out the white inner seed of the rose hip (it is bitter) and eat only the flesh. Most of the rose bush is edible, but I stick to the hips and petals. Rose petals are a joy to collect and cutting them just promotes more growth on the plant. They have been used as medicine and food, and in cosmetics, liqueurs, potpourris, perfumes and love potions!

❊ ***Savour the moment as you collect a fragrant cup of petals. Blend them into a cup of unpasteurized honey and leave for four to six weeks. I enjoy my rose honey on buttered toast with a sprinkle of cinnamon for a soothing afternoon treat.*** ❊

Stinging Nettles (*Urtica dioica*)

There's no need to be afraid of this stinging plant as long as you take the necessary precautions: wear gloves and long sleeves. Nettles have tiny hairs that irritate the skin if you touch them. Never eat fresh nettles; the hairs will severely irritate your mouth and throat. The hairs are no longer bothersome once the greenery is dried or cooked. Tea made from nettles is safe to drink daily and its anti-allergenic properties help relieve hay fever, asthma, itchy skin or insect bites. Like violets and many early spring plants, nettles are great at getting rid of the over-wintered gunk in your system. This gentle detoxifying herb cleanses the body by increasing urine and helping eliminate waste products. It's an excellent source of iron. It's not the prettiest plant, but it's prized by herbalists for its tastiness

Continued on page 10

Photograph by Stephen Johnson

Stinging nettle

Photograph by Karen Carillo

*Native plants, including blue skullcap (*Scutellaria lateriflora*), elderberry (Sambucus sp.), strawberry (*Fragaria *sp.) and evening primrose (*Oenothera biennis*) flowers, can offer great rewards when used as food or for healing.*

Continued from page 9

(especially when young), ease of use and health benefits. My patch of nettles is tucked away in a corner of my garden, off to the side so that no one accidentally brushes past. I find nettles look striking en masse! I successfully started some from seed. Nettles are a prized possession after all.

❊ ***My favourite way to use nettles is by making an infusion with the leaves (dried or fresh). I put a couple of tablespoons of leaves into a quart mason jar and pour boiling water to the top, put the lid on and wait 24 hours. This allows all the amazing properties the plant has stored to come to the fore, resulting in a stunning deep green tea. You can also cook stinging nettles much like you would other greens.*** ❊

Common Evening Primrose (*Oenothera biennis*)

The leaves, flower buds and green pods can all be cooked and used like greens. Flowers and flower buds make a pretty addition to salads. The roots and flower buds have been used in pickling. The leaves can thicken soups, similar to okra. The first-year roots can be used like a root vegetable (such as rutabagas or radishes), but some people find them too peppery. I'd suggest using the roots in spicy dishes or sparingly, if you can't stand the heat. Infuse the roots and shoot tips and add some honey for a soothing tea; the antispasmodic and sedative effects help to relieve cold and flu symptoms. Evening primrose oil is rich in essential fatty acids, brings down inflammation, reduces imbalances and abnormalities in prostaglandin production and regulates liver function. Clinical studies have proven the oil is great for treating asthma, psoriasis, arthritis, weak immune systems, infertility, premenstrual syndrome, and heart and vascular diseases. The oil-rich seeds can be used much as you would poppy seeds.

❊ ***Pick the flowers, put them in a jar and fill with apple cider vinegar. Let sit for four to six weeks. I never have enough evening primrose flowers to make a decent amount of vinegar, so I wander around the garden each day picking the flowers of other herbs and adding them to the mix (I always leave enough for the bees and bugs too). By the end of the week, I will have filled up the mason jar with native flowers such as elderberry, bee balms (*Monarda *spp.), roses and other herbs.*** ❊

Trying to bend nature to our will has been part of the human experience for centuries, but somewhere along the way we've lost our deeper connection to it. I believe that as people learn how valuable native plants are to our health and the environment, they will start to cherish them again and take better care of nature. May we all, like my brother, embrace and learn to enjoy the native plants that grow on our properties, for the sake of nature and our sanity.

Karen Carillo is an artistic entrepreneur on sabbatical, exploring botanical medicinals for culinary uses. She is currently building her own permaculture garden in the heart of Toronto.

PHOTOGRAPH BY LINDA READ

Rosa carolina *(pasture rose)*

BE AWARE

The information provided in this article is meant for educational purposes only and is not a substitute for medical treatment or advice. Our bodies are all different and we may react differently to certain foods and medicines. Always sample new foods and plants in small amounts in case you have an adverse reaction. Do your own research to make sure the plants you try are right for you. Some herbs are contraindicated in pregnancy or may interact with medications.

A Trail Called Home: Tree Stories from the Golden Horseshoe

by Paul O'Hara
Dundurn, Toronto, 2019
232 pages, colour photos

Upon opening the parcel containing *A Trail Called Home*, my first thought was: "What a beautiful little book, so lovingly rendered!" I discovered that my sentiment extended not only to the cover and physical presentation but the contents as well. Author Paul O'Hara, a field botanist, landscape designer and native plant gardening expert, reveals his deep affection for trees, forests and ecosystems.

The book weaves its way through his life and how the natural landscape shaped his experiences (even with his band of rambunctious friends). Essays discuss trees and forests from historical, ecological and geographic perspectives. Beautiful colour photos, old maps and paintings and the results of meticulous research paint a rich picture of how things were and how they've evolved, from pre-colonial times to the catastrophic modern-day losses of forests from imported diseases, pests and invasive plants, rampant development and other human-created follies.

For Paul, a special topic of interest is trail marker trees, whose branches were likely modified by Indigenous people as exit signs off main trails to direct the traveller towards "villages and camps, water sources and river fords, food and medicine gathering areas, or to mark boundaries between First Nations." The book features photographs of numerous trees still standing that are bent into very strange shapes. Paul spoke with Indigenous elders and read county histories and accounts of early travellers to learn more, looking – as most of us tend to do – for definitive answers, but came to this conclusion: "I will probably never know the truth about marker trees in southern Ontario and the Golden Horseshoe, and I'm okay with that." If *you* want to know more, such as how the marker trees are thought to have been formed, you'll have to read the book!

The appendices on native and exotic trees and tree-like shrubs in the Golden Horseshoe provide detailed information about where each is found (street, field, forest or water environments), their conservation status, peculiar characteristics and intriguing bits of information. For example, the cherry birch (*Betula lenta*) "was probably more common in pre-settlement times on the lakeplain between Niagara and Hamilton before those forests were cleared."

Paul generously shares his huge store of knowledge about the region's trees, but I think the greatest value to be gained from this book lies in his philosophical musings and his efforts to engage more of us with nature. He talks about "the personalities and preferences of different trees – how the beech tree shies away from the sun and the black oak seeks it out; how the ironwood sits below the canopy while the white pine pushes above it; how the beech, sugar maple, hemlock, and yellow birch gather in groups…" He notes that "our bodies, brains, and spirits are designed to observe the natural world." We should struggle less, create more space in our lives for leisure and "start building a friendship with the land." It all begins by recognizing trees, by learning to name them: "When you start putting names to trees, you begin to see patterns, and with those patterns comes understanding, and with understanding comes friendship, and with friendship comes respect, and with respect comes the possibility of a deeper connection – perhaps even love." Yes, absolutely.

Review by Irene Fedun,
editor of The Blazing Star.

Letter to the Editor

Re: *Botanizing the Bruce, Blazing Star*, volume 19, issue 3

The northern part of the Niagara Escarpment World Biosphere Reserve includes almost all of the escarpment on the peninsula plus lands near the escarpment, but over half the peninsula's area is outside the reserve.

The Bruce's oldest trees, which are the oldest known trees of eastern North America (ignoring fossils), are northern (or eastern) white cedars (*Thuja occidentalis*) growing on escarpment cliffs, not in forests.

The maximum depth of Wisconsin glacial ice would have occurred well before the first parts of the Bruce became ice-free, which was possibly over 12,000 years ago. Much of the Bruce's vascular flora would have moved northwards to the peninsula some time after glaciation. Hart's tongue fern (*Asplenium scolopendrium*) would not have been among the earlier species to do so.

My book, *The Vascular Plants of the Bruce Peninsula, Ontario*, was published in 2016, not 2015.

"The 175 plant species of Grey and Bruce Counties" should have read "the 175 woody native plant species...." The Bruce Peninsula alone has something under 1,400 vascular plant species (not including subspecies, etc.) known in the wild.

Joe Johnson
Karsdale, Nova Scotia

Editor's note: Some of the criticisms expressed in Joe Johnson's letter have been omitted, partly due to space considerations.

Restoration and the New Ecology

by Suzanne Dingwell

Have you heard of the New Ecology? In his excellent book of the same title, Yale University professor Oswald Schmitz explains the changes of thought that have led ecologists to shift from studying ecosystems to sustain them for their own sake toward a more comprehensive vision recognizing humans as an integral part of ecosystems, not a separate element outside them. As lovers of native plants – and witnesses to the reality of species decline – we can benefit from understanding this new vision as we pursue our own endeavours, big or small, in the race to provide a more rich and diverse future for succeeding generations.

First, the good news: many people who don't usually have anything to do with restoration are becoming engaged. Dr. Kingsley Dixon, an award-winning research biologist-botanist and professor at the Curtin University in Australia, explained at a conference hosted by the Society for Ecological Restoration (SER) this spring that the restoration culture, which used to belong to a small group of interested parties, is currently undergoing vast expansion. As it becomes ever more apparent that biological complexity plays a key role in the ecological functions humans need in support not only of their livelihoods, but also their health and well-being, new advocates are being drawn in. Dixon reported with amusement that he is even getting calls from banks, asking for help in understanding ecological restoration issues. He emphasized the need to stop ourselves, as environmental advocates, from thinking of the problems in terms of "Us versus Them." It's just US!

Top row from left to right: Pseudomasaris *sp. wasp and white-shouldered bumblebee head for a native beardtongue (*Penstemon *sp.); western meadowlark. Bottom row: Abert's squirrel; painted lady butterfly on western wallflower (*Erysimum capitatum*)*

Photograph by Suzanne Dingwell

Dixon, co-author of the International Standards for Native Seeds in Restoration (**ser-insr.org**), is currently engaged in serious efforts to boost the use of ethically sourced native seeds in restoration projects worldwide. His research focuses on the achievement of high germination rates and successful establishment of the young plants. He has helped develop a new root treatment compound that instructs the plant to "live dry," aiding the plant's ability to grow with less water. He was also instrumental in developing a polymer that envelops seeds in a packet, keeping them, along with the necessary microbes included in an inoculant, wet for 48 hours after planting.

His advice to people striving to facilitate restoration and conservation work:

- Think FAST TRACK
- Accept local solutions
- Talk to all the different disciplines that could contribute knowledge to a project
- Engage First Peoples and other traditional owners of the land
- Identify "champions" for your cause and link them to other "champions"

Some interesting ideas relating to the topic of wildfires were presented at the same SER conference. After a fire, restoration ecologists have an innate desire to restore what has been lost, said Daniel Laughlin, a plant ecologist at the University of Wyoming who has been studying the subject intensively. However, he went on to explain, tree mortality in our forests is already rising rapidly because of the many effects associated with warmer, drier trends caused by climate change. It is quite possible that conditions may no longer be right for some of the tree species that were destroyed by fire to be able to thrive in the same location now.

Laughlin's research is focused on studying which traits of trees, resistance to drought for instance, made it possible for a tree to be successful in a particular location. He has developed a model to make predictions about which species is most likely to adapt to a site now. While spruce (*Picea* spp.), black ash (*Fraxinus nigra*) and hop hornbeam (*Ostrya virginiana*) are not associates in modern conifer forests of the west, said Laughlin, archives show that these native species were present in the past and we should be willing to create new forest mixes using traits that are favourable to current conditions. Nature is changing fast and we have to change with it. His model is free to use: **http://plant-traits.net/about/software/**.

The subject of wildfires has certainly come blazing to public attention recently. Several presenters at the conference spoke passionately about the need to restore natural fire cycles. The smaller, more frequent but less-hot fires result in fewer, healthier trees, tree stands of mixed age,

and far more diverse and rich habitat for wildlife. Open spaces between the trees, a condition that was normal before fire suppression, provide for the presence of forbs and grasses, which are key to sustaining greater biodiversity. Challenges for the New Ecology include educating the public on why fires are necessary to forest health, finding ways to accommodate safe housing and fire, and alternatives to fire for management.

of water through the Ponderosa pine (*Pinus ponderosa*). He explains the movement of its needles in the wind and why Colorado's ponderosas sound different from the ones in California.

After I read his book, this quote from it carried a new meaning: "Nature yields no dividends; it contains the entire economy of every species. Nature needs no one; it is home. We can have no deficit of nature; we are nature, even when

PHOTOGRAPH BY SUZANNE DINGWELL

"It's time to see the forest in the purposeful absence of trees." Dr. Daniel Laughlin

David Haskell's new book, *Songs of the Trees*, brilliantly illustrates core concepts of the New Ecology including the importance of humankind's role – and our place – in nature. Studying trees from around the world, from South America to Canada, from Japan to Palestine, Scotland and beyond, Haskell weaves scientific facts about the trees with interactions that have developed over thousands of years between the trees and the people who lived near them. In Canada, he observes a balsam fir (*Abies balsamea*) and describes its incredibly complex relationships with birds, the chemical properties of its needles and the way its roots function in relationships underground. In Colorado, he uses instruments to understand through sounds the movement

we are unaware of the nature. With understanding that humans belong in the world, discernment of the beautiful and good can emerge from human minds networked within the community of life, not human minds peering in from outside."

Moving from the philosophical to the practical, readers who are gardeners will appreciate these books, all written with a consciousness of the special challenges of our times: *Planting in the Post Wild World* by Rainer & West; *Climate-Wise Landscaping* by Reed & Stibolt; *Garden Revolution* by Weaner; and, for a passionate and cogent argument on the ethics of using native plants, *A New Garden Ethic* by Vogt.

Continued on page 14

Continued from page 13

Photograph by Suzanne Dingwell

A group studies wildflowers on public land in Boulder. "Let us view these lands as a commons." Tim Hogan

While news on the ecology front is dire, it is not yet without hope. We human beings are an integral part of the natural whole. Will we lie down under the trees, go to sleep and dream away the future? Or will we be a contributing component of the functioning ecosystem we belong to? In a talk this spring about the flora of Boulder's mountain parks, Tim Hogan, collection manager for the herbarium at Colorado University, shared a thought that has resonated in my mind ever since: "I would like to suggest we begin to view these lands as a commons. Not the commons of tragedy on which individuals pursue their singular ends, but rather a commons of sharing and cooperation, upon which the citizenry as a whole has come to an agreement as to what is best for the plant and animal communities that flourish here, and for those of us who are fortunate enough to share it with this more-than-human world. This can become the context in which we restore and begin to make reparation with these lands and with each other."

Suzanne Dingwell has been an active member of the Florida, Virginia and Maryland Native Plant Societies. At one time certified as both a Master Gardener and a Master Naturalist in Florida and then a Master Naturalist in Virginia, she is currently contributing to the Colorado Native Plant Society and volunteering with Boulder's Open Space and Mountain Parks.

SPANISH MOSS ATTRACTS WILDLIFE, EVEN INDOORS

Photograph by Stephen Johnson

*An odorous house ant (*Tapinoma sessile*) took up residence in one of the clumps of Spanish moss (*Tillandsia usneoides*) in Stephen Johnson's basement this spring.*

Continued from page 1 – **Round-Headed Bush Clover**

protein, the plant is occasionally browsed by mammalian herbivores such as cattle, deer and rabbits. As a member of the bean family, *L. capitata* fixes nitrogen in the soil.

In autumn, the pollinated flower heads turn from a pale lime green to yellow, orange, copper and finally a rich brown. The seed heads hold on all winter, providing food for mourning doves, bobwhites and wild turkeys.

I find that being a word hound enriches my experience of plants. The genus name *Lespedeza* came about in a convoluted way as an attempt to honour Vicente Manuel de Cespedes, Spanish governor of East Florida from 1784 to 1790. Cespedes gave explorer André Michaux permission to search the Florida panhandle for new plants and, of course, name them. But when Michaux's book *Flora Borealis-Americana* was printed in 1802 "Cespedes" was misprinted as "Lespedez," giving us *Lespedeza*. *Capitata* means dense head.

The Native American Pawnee called round-headed bush clover "rabbit foot" for the shape and appearance of its flower heads. What do skippers call it when they come to lay their eggs in a primal hope? What do ground-foraging birds call it when they find the seeds necessary to create the chemical reactions that fuel and heat their bodies on a cold winter's day? What will we call it when we brush by in a meadow on our way to the horizon?

Benjamin Vogt *owns the prairie-inspired design firm Monarch Gardens LLC. He speaks nationally on native plant landscapes and environmental philosophy. Benjamin is the author of* A New Garden Ethic: Cultivating Defiant Compassion for an Uncertain Future. *He lives with his wife and son on a 1/4 acre mostly prairie, suburban lot in Lincoln, Nebraska.*

Photograph by Benjamin Vogt

Lespedeza capitata *in full bloom in mid-summer*

Photograph by Benjamin Vogt

Late summer

Photograph by Benjamin Vogt

Brown seed head in fall

SUMMER 2019

NANPS MEMBERSHIP

New membership ◯ **Renewal** ◯

Change of Address ◯ **Gift** ◯

	Digital Blazing Star	Paper Blazing Star (Includes mailing costs)
_____ **1-year regular membership:**	**$25**	**$30**
_____ **2-year regular membership:**	**$40**	**$50**
_____ **3-year regular membership:**	**$60**	**$75**
_____ **5-year sustaining membership:** (includes $100 tax receipt)	**$200**	**$225**
_____ **Full-time student membership:**	**$10**	Digital Only

Name of institution _____

_____ **Donation** (Canadian tax receipts are issued for donations of $20 or more. Canadian registered charity #130720824 RR0001)

_____ **Total** ___ **cheque** (payable to NANPS)

For online applications with credit card go to www.nanps.org

DATE _____

NAME _____

ADDRESS _____

_____

CITY _____

PROVINCE/STATE _____

POSTAL/ZIP CODE _____

PHONE (optional) _____

**EMAIL* _____

Required for digital copies of The Blazing Star

◯ I am interested in volunteering with NANPS. Please contact me.

Send this completed form along with your cheque to:

NORTH AMERICAN NATIVE PLANT SOCIETY
Box 69070, St. Clair P.O., Toronto, Ontario, Canada
M4T 3A1

The North American Native Plant Society treats all information we receive as confidential. We do not rent, sell or provide this information to third parties.

NORTH AMERICAN
NATIVE PLANT SOCIETY

Box 69070,
St. Clair P.O., Toronto,
Ontario, Canada
M4T 3A1

CANADA POST POSTES CANADA

Postage paid Port payé
Publications Mail Poste-publications
PM41578532