



Native Plant to Know

Snow Trillium

Trillium nivale

by Stephen Johnson and Mary Stark

Midwestern native plant aficionados are particularly lucky to have one of the earliest flowering wildflowers in their midst, opening its flowers “when March is scarcely here.” The snow trillium (*Trillium nivale*), also known as dwarf white trillium, is diminutive compared to other members of the genus. For such a small plant, it has relatively large flowers that even shade the leaves. Plants of some populations may possess far more flamboyant flowers appearing as miniature doppelgangers of the better known white trillium (*T. grandiflorum*).

Snow trillium occurs in broad but scattered population clusters referred to as disjunct populations, occurring primarily in a broad arc from mid-Iowa south through Illinois and Indiana. Some sporadic colonies occur as far west as eastern South Dakota and in eastern Pennsylvania. A single colony overlooks the Potomac River in western Virginia. *Trillium nivale* ranges north to southern Minnesota and Michigan but is

undocumented in Canada. Throughout its range it occurs infrequently. In Pennsylvania, it is a state threatened species; in Minnesota, it is a species of special concern. In Michigan, it was once considered extinct but relocated by Fred Case in 1982 and now given threatened status.

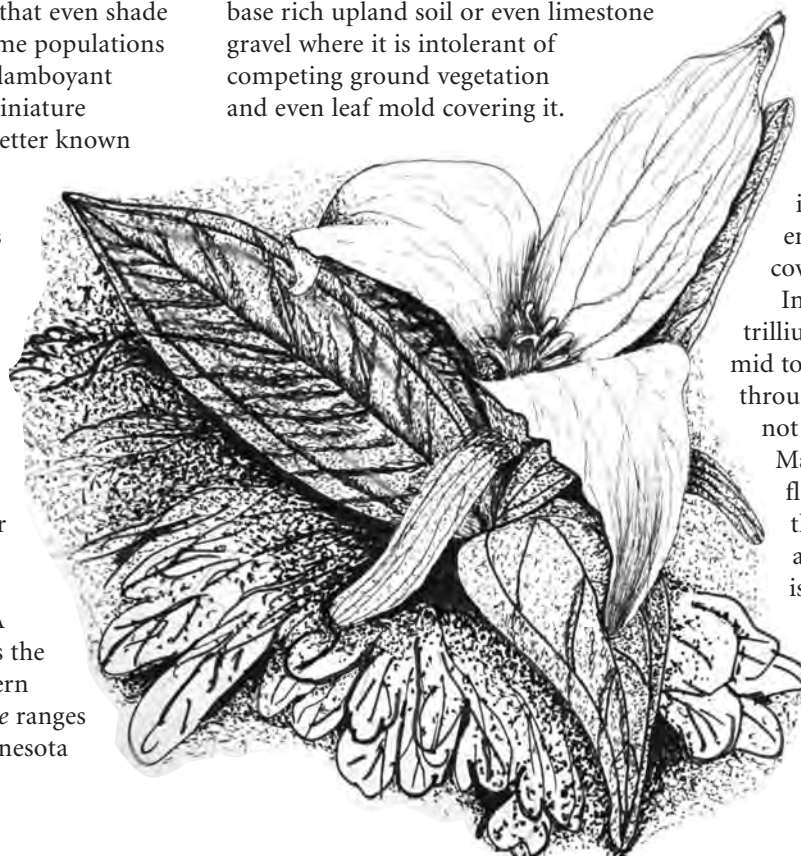
The late Frederick W. Case, Jr., the most notable authority on the genus *Trillium*, said the species occupies raw base rich upland soil or even limestone gravel where it is intolerant of competing ground vegetation and even leaf mold covering it.

The plant also grows on lime-rich bluffs along river flood plains. Other botanists have found populations in more typical forest settings such as beneath eastern hemlock (*Tsuga canadensis*). We located a population of 25 to 30 individuals in an oak-hickory forest in a county park in southeast Iowa, south of the range indicated by Case. Perhaps this

represents another disjunct population. We saw a few young plants in this colony indicating that the population is at least growing, albeit rather slowly. Unlike the conditions indicated by Case, these plants emerge from a variably dense cover of leaf mold.

In some parts of its range, snow trillium may begin flowering in mid to late February and continue throughout March. In Iowa we have not found it in flower before late March. As such an early flowering plant, it likely misses the pollinators and so it comes as little surprise that *T. nivale* is self-compatible. Some researchers report that it is visited by honeybees but we have not witnessed this. We have occasionally seen the flowers visited by small flies

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.

Winter 2015
Volume 16, Issue 1
ISSN 2291-8280

Editor: Irene Fedun
Production: Bea Paterson
Proofreader: Eileen Atkinson
Printed by: Guild Printing,
Markham, Ontario

© North American Native Plant Society
Images © the photographers and
illustrators, text © the authors.
All rights reserved.

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 84, Stn D, Toronto, ON
M9A 4X1.

Telephone: (416) 631-4438.
E-mail: nanps@nanps.org.
Web: www.nanps.org.

Board of Directors:

Honorary President: James A. French
Executive Director: Peter Kelly
Vice-President: Adam Mohamed
Secretary: Miriam Henriques
Treasurer: Janice Keil
Bill Ford
Alison Howson
Alice Kong
Myles Mackenzie
Howard Meadd
Harold Smith

Editorial

Happy New Year, NANPS members! We are off to a good start welcoming two new honorary directors, Margaret Atwood and Douglas Tallamy, and three new board members, Bill Ford, Myles Mackenzie and me, Alison Howson.

Margaret Atwood is known to us all. She has written more than 40 volumes of poetry, children's literature, fiction and non-fiction. She is an unflinching advocate for environmental issues and joint honorary president of the Rare Bird Society within BirdLife International. The Governor General Award-winning author was made a Companion of the Order of Canada in 1981.

Dr. Douglas Tallamy is a professor and chair of the Department of Entomology and Wildlife Ecology at the University of Delaware. His landmark publication *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants* (Timber Press, 2007) encourages us to think of our gardens as wildlife preserves and habitat for local diversity.

Dr. Bill Ford is an educational psychologist and director of a multi-disciplinary centre providing diagnosis, assessment and intervention services to individuals with learning differences. Bill and his wife Louise won the NANPS Conservation Award in 2013 for extensive wetland restoration on their farm near Creemore, Ontario.

Myles Mackenzie works for PMA Landscape Architects as project manager and lead planting specialist. His work is centered on creating sustainable environments

that are defined by their function, ecological integrity and lasting beauty. He is an avid native plant gardener and a passionate advocate for the creative use of native plants in everyday urban settings.

I am an ecologist and species at risk specialist at the Ontario Land Trust Alliance. My work includes delivering technical training and support to local land trusts in monitoring and managing sites for Species at Risk.

Now we have to say goodbye to outgoing board members Bronwen Fitzsimmons, Mukib Khan, Gillian Leitch, LeeAnne MacGregor and Cass Stabler. Organizations such as NANPS could not operate without the help of dedicated volunteers. Thank you for your service.

Congratulations go to winners of the NANPS awards handed out at our November AGM. The Red Mountain Campus of Mesa Community College in Mesa, Arizona was awarded the Founders Conservation Award for their efforts to restore and maintain native plant populations on their grounds. Angelique-Marie Mori of Hamilton, Ontario, Alan Bell and Paul Foster, both of Toronto, Ontario each received a NANPS Garden Award for their inspiring efforts to create native plant habitat in urban settings. Volunteer of the Year Awards went to Rolf Struthers and Vivienne Denton. Rolf has done an outstanding job updating and maintaining our membership records. Vivienne has been a long-time supporter of our seed exchange.

Alison Howson
NANPS board member



NANPS award winner Paul Foster in his native plant garden.

PHOTOGRAPH BY ALICE KONG

NANPS EVENTS

FEBRUARY 17 Barbara Fallis Memorial 2015
Speakers Series: Using Native Plants
in Constructed Wetlands and Alternative
Wastewater Treatment Technology

University of Toronto

FEBRUARY 21 Get the Jump on Spring
Toronto Botanical Garden

MARCH 13-17 Canada Blooms
Direct Energy Centre, Toronto

MARCH 14 Seedy Saturday
Scadding Court, Toronto

MARCH 19 Speakers Series: Reviving Rare
Plants at The Riverwood Conservancy
Toronto Botanical Garden

MARCH 22 Seedy Saturday
Evergreen Brickworks, Toronto

MARCH 28 Scarborough Seedy Saturday
& Green Fair

MARCH 30 Speakers Series: Flowers &
Food: Growing Edible Native Plants
Details on page 2

APRIL 18 Go Wild - Grow Wild 2015 Expo
London, Ontario

APRIL 25 The Healing Gardens Workshop
see below for details

MAY 9 NANPS Annual Native Plant Sale
Markham Civic Centre, Markham, Ontario

See accompanying brochures for details or visit www.nanps.org

VOLUNTEERS ALWAYS WELCOME

No experience necessary. Please contact us at
volunteer@nanps.org or call 416-631-4438 and
leave a message.

NANPS AWARD NOMINATIONS

The NANPS Conservation Award recognizes the extraordinary contribution of an individual or group to the conservation, protection or restoration of the natural heritage/native flora of North America at the community, regional, provincial, national or continental level. Deadline for submissions is May 31st.

NANPS Garden Awards recognize and celebrate the amazing gardens that support diverse habitat and shared accommodations for our native flora and fauna. The NANPS Volunteer Award is given to a volunteer who makes an outstanding contribution to the fulfilment of NANPS goals. Deadline for submissions for these awards is July 31st.

Visit www.nanps.org for more information.

FLOWERS AND FOOD: Growing Edible Native Plants

NANPS is proud to present noted author and environmentalist Lorraine Johnson speaking at the North York Central Library on Monday, March 30 at 7:30 p.m. on the subject of growing edible native plants. Lorraine, a former president of NANPS and contributor to *The Blazing Star*, has written 10 books, most recently *City Farmer: Adventures in Urban Food Growing*. This illustrated talk is the first of two NANPS Speakers Series presentations that will be videotaped and made available online thanks to generous funding from The McLean Foundation. See accompanying brochure or visit www.nanps.org for more information.

The Healing Gardens Workshop

April 25, 2015 - 9 a.m. - 4 p.m.

Workshop instructor: Dan Bissonnette, program coordinator for the Naturalized Habitat Network
Location: The Big Carrot, 348 Danforth Ave., Room 212, Toronto

The Healing Gardens Project is a special initiative of the Naturalized Habitat Network dedicated to education and support for the establishment of healing-themed gardens, including memorial, peace and meditation gardens and other sacred spaces which contribute to physical, mental and spiritual well-being. This workshop has been developed through an eclectic curriculum which includes Japanese and European landscaping techniques, First Nations healing traditions and modern therapeutic landscape practices, along with information on regionally native plants. Discussion will include the review and selection of suitable native trees, shrubs, grasses and wildflowers.

This one-day event is open to anyone with basic gardening skills. In addition to gardeners and native plant enthusiasts, these training seminars have proven useful for those interested in creating sacred spaces for yoga and tai chi, memorials, prayer and meditation, or anyone on a personal healing journey.

Refreshments and handouts included. Please bring your own mug.

Register online at

<http://eventbrite.ca/event/15190061> or mail the enclosed form to NANPS, P.O. Box 84, Station D, Toronto, Ontario M9A 4X1. NANPS members: \$50
General public: \$60. For more information email info@nanps.org. Advance registration required.



NANPS Supports Youth Summit Participant

Mariel Lepra is one busy young woman. An avid naturalist, she attended the Ontario Nature Youth Summit for the first time in the fall of 2013 and promptly decided to join the Ontario Nature Youth Council. At a retreat in February the following year, the Youth Council tossed around ideas for a youth campaign and settled on the plight of the pollinators, especially the use of neonicotinoid pesticides in the agricultural community and the horticulture industry. The group designed postcards and delivered a petition to Queen's Park, the Ontario legislature.

In 2014, 17-year-old Mariel was fortunate to receive a grant from the North American Native Plant Society to attend last fall's Youth Summit in Orillia, Ontario, with 90 other young people from 45 communities.

Mariel ran a workshop encouraging participants to Take the Pollinator Pledge and designed and created Ontario's Pollinator Pals poster.

Thanks to a grant from Mountain Equipment Co-op, the Youth Council is now preparing two videos. One illustrates the value of native plants for pollinators. The other focuses on the work and

achievements of ALUS (Alternative Land Use Services), a community-developed, farmer-delivered program that provides support to farmers and ranchers to enhance and maintain nature's benefits. Among other things, ALUS teaches farmers to plant native gardens or shelterbelts beside their fields to provide food and nesting sites for pollinators who will, in turn, help pollinate their crops.

Congratulations to Mariel and the Ontario Nature Youth Council for their important accomplishments on behalf of nature and pollinators.



In Memoriam: GRIFFITHS LAURENCE CUNNINGHAM 1930-2014

Grif Cunningham led a fascinating life that took him from the family peach farm in St. Catharines, Ontario to geography studies at the University of Toronto to London, England where he taught historical geography at University College and eventually to Tanzania where, accompanied by his family, he taught about cooperatives and world affairs, and became personal assistant to President Julius Nyerere.

In 1970, he returned to Toronto to accept a teaching post at York University. A dedicated teacher, he was deeply involved in the social, political and administrative life of the university.

His interests were many and varied including a deep love of nature. Jane Jacobs, the American-Canadian author and activist best known for her influence on urban studies, was a close neighbor of Grif's and he helped tend her garden.

Grif served on the NANPS land management committee for many years, helping to steward their two properties, Shining Tree Woods and Zinkan Island Cove. He also served as president of NANPS for one year and is remembered, among other things, for running efficient meetings! NANPS co-founder and past-president Tom Atkinson recalls, "Grif used to drive a cube truck to pick up plants for the annual plant sale and I went with him for two years. Despite his eccentric charm, he drove well. We fitted the back of the truck with what we laughingly called shelves. I am sure Grif must have scoured his Annex neighbourhood for the crates and boards we used, but they worked well. We lost no plants in those forays.

"Grif may have appeared abrupt," says Tom, "but it was only because he had a point of view, was ready to defend it, and did so in plain terms. Once you got on to him, he was a pussycat."

A progressive scholar, educator, native plant enthusiast, government advisor, citizen and farmer who believed we could achieve anything if we worked cooperatively, Grif is sorely missed by the native plant community and all who knew and admired him.

EDITOR'S CORRECTION

The photograph of *Spiranthes romanzoffiana* on page 15 of the fall 2014 issue of *The Blazing Star* was incorrectly attributed. The photograph was taken on Manitoulin Island by Zile Zichmanis.

The Ancient Cliff-face Cedars of Ontario's Niagara Escarpment

by Peter Kelly

Most of us can envision the towering redwoods and sequoias of California either from personal recollection or from the pages of *National Geographic*. Trees so wide cars drive right through them. Trees so tall their tops disappear into the canopy above. One thing is certain – these trees are very old. We could pick out the oldest trees from a lineup simply by choosing the biggest and the tallest of the lot. Or could we?

While many of the planet's tallest trees are among its oldest, there are species that reach

remarkable ages

without the defining attribute of great height. They challenge our assumptions of what an old tree looks like. Indeed, bristlecone pines (*Pinus longaeva*) are the oldest trees on earth yet they grow very slowly, appearing stunted and almost sickly as they cling to the slopes of California's White Mountains. Other western North American species like western juniper (*Juniperus occidentalis*) and southern foxtail pine (*Pinus balfouriana* subsp. *austrina*) have individuals that are over 1,000 years old but whose entire bodies could



PHOTOGRAPH BY PETER KELLY

Raccoons ascend a 500-year-old white cedar on their way to their cliff-face den.

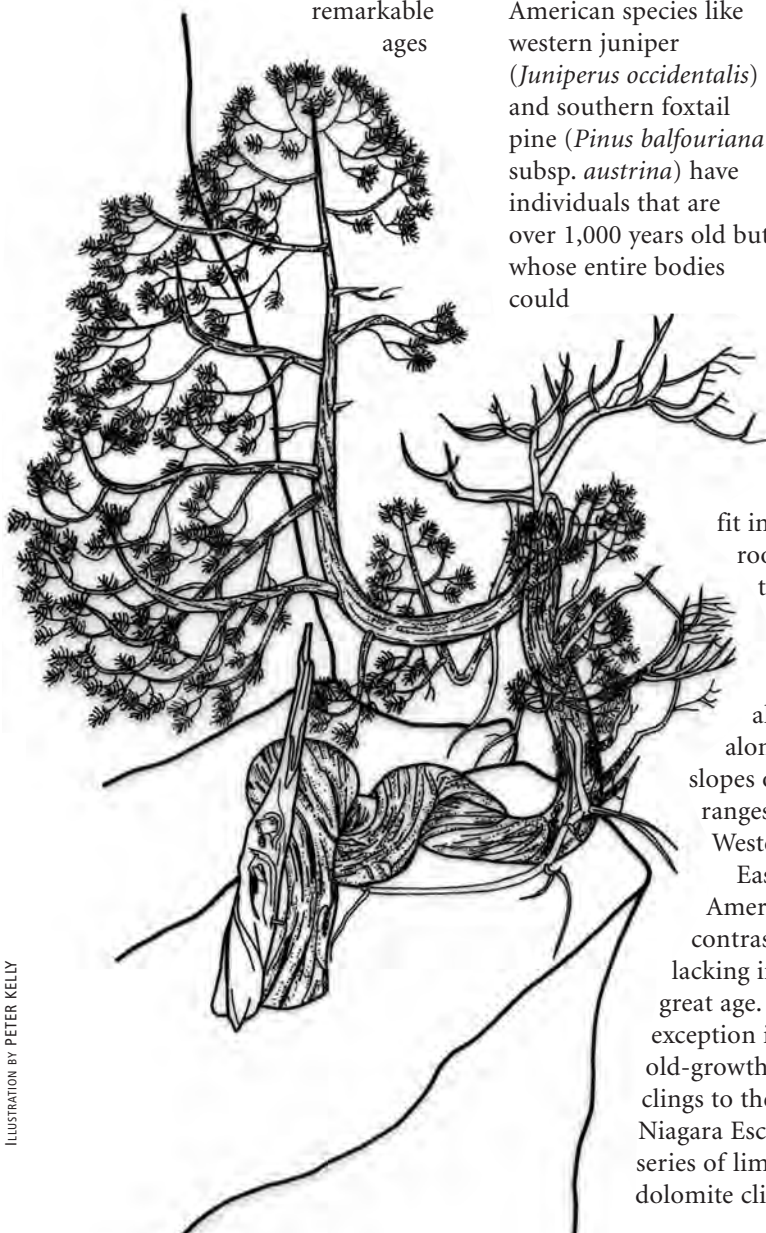


ILLUSTRATION BY PETER KELLY

fit into your living room. Most of the oldest individuals of these species grow at altitude and along the rocky slopes of mountain ranges in the Western Cordillera. Eastern North America, in contrast, is largely lacking in trees of a great age. A notable exception is the unusual old-growth forest that clings to the cliffs of the Niagara Escarpment, a series of limestone and dolomite cliffs that wend

their way across Southern Ontario. This escarpment formed 300-400 million years ago as large amounts of sediment and dead invertebrate organisms accumulated at the bottom of an inland sea that covered the interior of the North American continent. The escarpment was exposed as the softer surrounding rock eroded away. The present escarpment emerged from beneath the Wisconsinan Ice Sheet almost 13,000 years ago.

The Niagara Escarpment's cliff-face old-growth forest is comprised of eastern white cedars (*Thuja occidentalis*). This tree, also referred to as northern white cedar, is common throughout eastern North America. It was an important resource for First Nations peoples because of its

Continued on page 6

Continued from page 5

ubiquity and its resistance to decomposition. White cedar was used in the construction of palisades and longhouses, and for the skeletons of cedar-strip canoes, a vital transportation mode for the continent's first peoples. Cedar bark and leaves were used for medicinal teas and poultices. The plant was thought to cure everything from headaches and rheumatism to skin infections. For this reason, white cedar is one of four key medicines in the Medicine Wheel (along with sweetgrass, sage and tobacco), a First

poles and fence posts and rails. The advent of pressure-treated wood and chemical wood preservatives has limited white cedar's usefulness today, but it is still important in horticulture as an ornamental species. Foresters traditionally thought of white cedar as a relatively short-lived pioneer species that reached a maximum age of only 400 years. Discoveries of the old-growth cedars clinging to the ledges and cracks of the Niagara Escarpment have radically changed that thinking.

It is an old-growth forest like no other: hundreds of kilometres in

antiquity in trees of height and width.

No two cliff cedars over 300 years in age look alike. Each one is unique, their forms shaped by periodic disturbances from rockfall or ice-, snow- or wind-storms over the course of their lives. The main axes of most of these cedars have long since died and a branch (or branches) has taken over as its principal leader. Many cedar trees hang upside-down on the cliff, with the roots far above the living branches. Others twist wildly as they emerge from the cliff and have assumed a spiral growth pattern. The oldest cedars taper sharply from base to tip, another sign of advanced age.

White cedars have the ideal plumbing system for trees growing on unstable substrates like cliffs or eroding stream banks. Individual root clusters entombed within the rock are connected to individual longitudinal strips of living phloem (tissue that transports organic nutrients within the tree) and xylem (tissue that transports water within the tree) that feed very specific clusters of branches. When a root cluster dies, the water and nutrient supply is

cut off from those branches. This leads to their death but leaves the remaining clusters of living branches unaffected. Rather than one "garden hose," so to speak, feeding the entire tree, there are multiple garden hoses that feed individual parts of the tree. If you turn one hose off, the others continue to flow and feed very different sectors of the tree. In the oldest white cedars, these periodic episodes of root death produce what is known as a strip-bark



PHOTOGRAPH BY PETER KELLY

White cedars cling to the side of a "flowerpot", one of several unique geological formations within Canada's Fathom Five National Marine Park.

Nations symbol that teaches a holistic view of the world from a native perspective. Its historical importance as a living pharmacy has meant that even today white cedar is incorporated into native funeral and purification ceremonies.

From a forestry perspective, white cedar's seemingly indestructible but lightweight wood was used by early settlers of eastern North America to fashion railway ties, shingles, telegraph

length but with a width of no more than 35 metres (115 feet), the maximum height of the cliffs. It would take weeks for you to walk its length but only a few seconds to travel its width – straight down. Since the trees grow on vertical cliff faces, the forest has no discernible area if mapped using standard means. Their considerable age remained hidden for so long because the cedars lacked the commonly accepted characteristics of



Strip-bark growth is a characteristic of virtually all white cedars over 300 years in age. Living wood abuts dead white wood that has sloughed off its bark. This longitudinal portion of the trunk was hydraulically connected to roots which have subsequently died.

growth pattern (also known as stem-stripping). Quite simply, the oldest cedars have alternating strips of living bark and dead wood – where the bark has sloughed off and the wood is now bleached white. The ability to produce strip-bark is essential to the long-term survival of these trees. Trees without this capability living under similar circumstances would have perished long before these white cedars because any amount of root death would affect the entire tree, not just portions of it.

How old are these white cedars? To date, 124 living cedars over 500 years in age have been found growing on the cliff faces of the Niagara Escarpment.

years old.

What is the secret to old age in these cedars? How can they survive for so long while growing in virtually no soil? Why is it that they can do it but no others can? Studies have shown that these cedars don't need soil because they get all the nutrients they need from waters that percolate down through the rock and emerge onto the cliff face. Supplying them with added water or nutrients doesn't make them grow markedly faster. Other research has shown that when it comes to surviving on a cliff face, slow and steady wins the race. In a simulated

Ten of these trees are over 1,000 years in age. The oldest tree, a cedar close to seven metres tall and growing under an overhang on the cliff at Lion's Head Provincial Nature Reserve is 1,327 years in age. It germinated in 688 A.D., before the Crusades, the rise of the Inca Kingdom in Peru or the invention of gunpowder. When this tree began life, Mohammed, the founder of Islam, had been dead for 56 years. Two other older, but dead, cedars have also been found. Both of them are over 1,500 years in age; one is estimated to have died when it was close to 1,700

experiment, researchers planted the seeds of cedars and other common local tree species on artificial cliff faces and followed their progress for several years. While the seeds of most of these trees germinated, after three years only the cedars survived. The others had literally grown so fast that they had pushed themselves off the cliff.

AGING THE CEDARS

How does one determine the age of an old cedar (without cutting it down of course)? In forestry, a small hand-powered device known as an increment borer is turned into the tree to extract a specimen of wood (and, more importantly, a record of the tree rings preserved in the wood) that is approximately four millimetres (.16 inch) wide and the length of the tree's diameter or radius. It's like a biopsy needle for trees. These pencil-shaped samples are glued into grooves on wooden boards, sanded and counted under a stereomicroscope. Tree-ring counts are confirmed and/or corrected using a technique known as cross-dating where individual ring widths are measured and compared using a computer program that identifies patterns of ring growth between trees at the same site (such as a section of cliff face or rock outcrop). A similar pattern of growth (as expressed as tree-ring width) will be repeated in most of the trees at one site. This pattern reflects the overriding influence that annual climate will have on the entire white cedar forest.

As adults, the cedars continue to grow slowly because there is little room for root expansion within the rock. The amount of aboveground biomass in a tree (i.e. trunk, branches, leaves etc.) is directly proportional to its root mass: in other words, you can't get a big tree from a tiny root system. Since the cedars grow slowly, they stay relatively small. They may be only a few metres tall, but hundreds of years old. That is the secret to long life on a

Continued on page 8

Continued from page 7

cliff. If you stay small, and stick close to the rock surface, you avoid all the punishing winds and storms that can fell much younger and bigger trees in surrounding habitats. We can't say that the cedars thrive on the cliffs, but because they are the only trees that can survive at all, they have an entire habitat to themselves. Who says the little guy doesn't win every once in a while?

Peter Kelly is the executive director of the North American Native Plant Society and co-author with D.W. Larson of The Last Stand: A Journey through the Ancient Cliff-Face Forest of the Niagara Escarpment, Natural Heritage Books/The Dundurn Group, 2007.



PHOTOGRAPH BY PETER KELLY

A section of the Niagara Escarpment known as Old Baldy. The oldest cedar on this cliff face is 775 years in age.

Use of Controversial Pesticides Banned in U.S. National Wildlife Refuges

by Maryann Whitman

After facing a series of legal challenges from environmental groups around the country, the United States Fish and Wildlife Service (USFWS) has issued a memorandum to the effect that by January 2016, it will have phased out the use of neonicotinoid pesticides and “genetically engineered crop seeds” on National Wildlife Refuges, on over 150 million acres (over 60 million hectares). “This conforms to the Service’s Biological Integrity, Diversity, and Environmental Health Policy” with respect to the refuges, and is “based on the underlying principle

of wildlife conservation that favors management that restores or mimics natural ecosystem processes.”

Neonicotinoid pesticides not only act as systemic poisons of pollinators, but widespread contamination by neonicotinoids in soils and in surface waters also poisons creatures like earthworms and crayfish, thereby having effects on up the food chain. The chemical structure of these pesticides is such that some of them persist in the soil for years.

Genetically modified crops permit the increasingly widespread use of powerful and indiscriminant pesticides on row crops.

Further, the U.S. Fish and Wildlife Service recognized that “transitioning any refuge land from a primarily agricultural use to restored, native habitat works to achieve the Service goal of minimizing our carbon footprint as set forth in Rising to the Urgent Challenge, Strategic Plan for Responding to Accelerating Climate Change (USFWS 2010).”

Maryann Whitman is the editor of Wild Ones Journal. This article was originally published in the Aug/Sept/Oct. 2014 issue. It is reprinted here with permission.

Ontario Targets Neonics

On the Health Canada website, the Pest Management Regulatory Agency notes that it “has determined that current agricultural practices related to the use of neonicotinoid treated corn and soybean seed are affecting the environment due to their impacts on bees and other pollinators.” It goes on to say, “In the spring and summer of 2012, we received a significant

number of pollinator mortality reports mainly from corn-growing regions of Ontario and Quebec. ... Approximately 70% of the affected dead bee samples tested positive for residues of neonicotinoid insecticides used to treat corn seeds while neonicotinoids were only detected in unaffected bees in one sample at very low levels.”

In his annual report last October, Ontario Environment Commissioner Gord Miller urged the provincial government to measure the impact of neonicotinoids (aka neonics) on the environment but stated that he would prefer a moratorium on their use. Several European countries have banned the use of this neuro-active pesticide widely used by corn and

soybean farmers in Canada. “This is the biggest threat to the structure and ecological integrity of the ecosystem that I have encountered in my life... bigger than DDT,” he said.

Last November, the Ontario government responded by limiting the use of neonics. The Ministry of Agriculture, Food and Rural Affairs laid out a three-point plan to ensure

“healthy ecosystems” while maintaining a “productive agricultural sector” and reversing the decline in pollinator numbers.

- 80% reduction in acreage planted with neonic-treated corn and soybean seeds by 2017
- Limiting the number of honey bees that die during winter by 15% by 2020

- Developing a “comprehensive” action plan for pollinator health
- Although the Ontario Beekeepers’ Association and environmentalists have called for an outright ban on the pesticide, only Health Canada can issue a ban and so far the Canadian government has refused to act.

Bee-killing pesticides found in nursery plants

A study published last June by Friends of the Earth (FOE) and allies, entitled *Gardeners Beware 2014*, found that 51% of garden plant samples purchased at garden retailers across the United States and Canada contained neonics. Some of the flowers had pesticide levels high enough to kill bees.

The study, a follow-up to a pilot conducted by FOE the previous year, expanded the number of samples and locations where plants were purchased. It also assessed the

distribution of neonics between the flowers and the rest of the plant. Since these pesticides do not break down quickly, the plants could remain toxic to bees and other pollinators for many years.

The conclusion: Buy only organic, preferably native plants and urge your local nursery and garden retailer to stop purchasing

neonic-treated plants. Visit www.BeeAction.org to read the full report and www.FoE.org to join their bee-friendly campaign.



Original Art
by
Brigitte Granton

Acrylic, Oil and Ink.
Commission work by request.

visit www.brigittegranton.com



Bumblebee on stiff goldenrod (*Solidago rigida*)

PHOTOGRAPH BY CHARLES ISCOVE



**GIVING NATIVE PLANTS
A PLACE TO GROW**

www.LongPointLandTrust.ca



Grow Wild!

Native plant nursery,
landscaping and
ecological services
www.grow-wild.com

3784 Hwy 7,
Omeme, Ontario
(by appointment only)

Home: 705.799.2619
(Paul Heydon)
Cell: 416.735.7490
info@grow-wild.com

Heaven in a Wild Flower

by Muriel Hart

I had the great good fortune to be born into a family of nature lovers and skilled needlewomen. They generously shared their interests and skills with me so that I grew to enjoy nature and crafts. Sometimes I could enjoy both simultaneously, such as when I was a little girl crocheting in the canoe while my mother, father and brother did all the paddling. My grandmother in Guelph adored wildflowers and, on walks to Riverside Park, she would point out the non-native Queen Anne's lace (*Daucus carota*) to me. I thought the name sounded romantic and it reminded me of the lace she was teaching me to crochet. My family regarded wildflowers as precious jewels of nature and I was intrigued that I could find them in so many places: by the roadside, in my mother's pesticide-free garden (unusual for 1960s Toronto), by the sidewalk going to school, on Toronto Island, or on the Bruce Trail, where I remember being thrilled to see the Province of

Ontario's floral emblem, the white trillium (*Trillium grandiflorum*). When I was older, my father, who loved yellow, would tell me about seeing marsh marigolds (*Caltha palustris*) on his Bruce Trail hikes with my mother.

Happily, my love for nature led me to a Sierra Club hike on the Niagara Escarpment in 1991 and to my future husband Nigel, a fellow nature lover. Nigel expresses his fascination with nature with his



PHOTOGRAPH BY NIGEL HART

Muriel's rose pogonia (*Pogonia ophioglossoides*) was one of the pillows auctioned to raise funds for the Canadian Breast Cancer Foundation. Others were calypso orchid, twin flower, fringed polygala and bird's-eye primrose (*Primula mistassinica*).



PHOTOGRAPH BY NIGEL HART

This dwarf lake iris (*Iris lacustris*) pillow was among the ones donated for the fundraising efforts of The Friends of the Bruce District Parks Association. Others were yellow lady's slipper orchid (*Cypripedium parviflorum*), ram's head lady's slipper orchid (*Cypripedium arietinum*) and lakeside daisy (*Hymenoxys herbacea*).

photography. We have taken many trips to what I call "botanical paradise," formally known as the Bruce Peninsula. While I waited for Nigel to take his photographs, I wanted to identify the wildflowers around me. I thought it would be wonderful to have a botanist along to help, but needless to say, one did not materialize. Not surprisingly, since I am a librarian with the Toronto Public Library, I have started a wildflower field guide collection that includes *The ROM Field Guide to*

Wildflowers of Ontario and many other publications.

When I was a child my mother taught me how to sew, both by hand and on a sewing machine. As an adult I learned to quilt by hand at a class at The Quilter's Palette (now closed), a shop in Toronto which was run by two members of The Etobicoke Quilters' Guild. When I learned how to hand appliqué, I realized the creative possibilities and decided to design some appliqué quilt blocks (or squares) of wildflowers. In *The Sounding Line*, the newsletter of The Friends of the Bruce District Parks Association, I noticed that The Tempest, the visitor centre gift shop in the Bruce Peninsula National Park, was hosting a fundraiser for breast cancer research and they were looking for items to raise funds. How could I contribute? A colourful quilted pillow of a wildflower, of course. I made a sketch of four pink calypso orchids (*Calypso bulbosa*), arranged symmetrically within a square, with

the common name twice around the border, to be made into a quilt block and then into a pillow.

I start each project by making a small sketch of a possible design, then I consult my field guides and photographs on the Internet for botanical accuracy. I make the fabric shapes large enough to be able to stitch them to the cream background fabric. Once I decide how to arrange the wildflowers into a design, I make a full-sized sketch and create templates (or pattern pieces) of the parts of the flower. I then trace these templates with a pencil onto cotton fabric. I like to use solid-coloured fabric since it was used in antique appliqué quilts and I admire their bold, graphic style. I baste (or stitch) the fabric shapes to the cream background piece. Then I use a traditional needleturn appliqué technique, where I turn under the raw edge of the fabric with a needle as I do an appliqué (or fell) stitch. I cross

stitch the common name of the flower onto the sashing (or borders) of the quilt block, sew the sashing to the appliqué block and then hand-quilt a design around the wildflower and the stitching on the sashing. Finally, the quilt block is stitched into a 40-centimetre (16-inch) square pillow and I register



PHOTOGRAPH BY NIGEL HART

Lakeside daisy pillow

Specializing in container grown Trees & Shrubs native to Ontario



Not So
Hollow

(705) 466-6290
natives@enviroscape.on.ca
www.notsohollowfarm.ca

Design & Consulting services available by OALA member

the design for copyright.

The Tempest shop is no longer in operation, so each October I raise funds for the Canadian Breast Cancer Foundation by an online silent auction of a pink wildflower pillow. I was heartened to learn that the twin flower (*Linnaea borealis*) and fringed polygala (*Polygala paucifolia*) pillows were given as comforting objects to women recovering from surgery. For The

Friends of Bruce District Parks, I donate pillows in other colours to their lottery or silent auction held at their annual Orchid Festival (www.orchidfest.ca) in Tobermory every spring.

I only make designs of wildflowers I have seen in person or “met,” as I like to think. I look forward to “meeting” more wildflowers, not just for their suitability as designs for appliqué quilt blocks, but as significant

flowering plants to admire and protect for their important role in the environment.

To see a world in a grain of sand
And a heaven in a wild flower
Hold infinity in the palm of your
hand
And eternity in an hour.
-William Blake

Muriel Hart lives in Toronto, where she dreams about going with her husband Nigel on a heavenly wildflower trip to the Arctic. All designs © Muriel Hart 2010 to 2014.

"The Maple Leaf Forever Tree" Lives on in Art

The Maple Leaf Forever is a song written by poet, soldier and public school headmaster Alexander Muir to celebrate Canada's Confederation in 1867. The silver maple tree (*Acer saccharinum*) that is said to have inspired this unofficial anthem was felled by a windstorm in the summer of 2013. The belief that the tree at 62 Laing Street,

being created from the tree, many commissioned by well-known institutions such as the Royal Ontario Museum (ROM), the Queen's Own Rifles and the Museum of Civilization.

Craig Scott, Member of Parliament for Toronto-Danforth (the riding where the tree grew) and Blue Rodeo guitarist Colin Cripps approached the city with a plan to have two

purpose part of the tree into decorative items for display at a museum. Michael saw this as a way to educate the public about the history of this tree in particular and about the beauty and value of our native, locally grown trees to woodworking and artisanship. Michael offered to create a nested set of bowls with an artistic design for the ROM and they commissioned him to do the work. He also received commissions from people whose families had a historical connection to the MLF tree for pepper mills, pens and small bowls. A portion of the profits is being donated to LEAF (Local Enhancement and Appreciation of Forests), a non-profit organization dedicated to protecting the urban tree canopy.

The Ontario Wood Carvers Association was given a part of the trunk, about 2.5 metres (eight feet) in length and 80 centimetres in diameter at the bottom (30 inches). Natural imperfections such as holes, a raccoon den and, in some places, wood that is less than 2 ½ centimetres (one inch) thick are presenting interesting creative challenges. The volunteer carvers will take an estimated 6,000 carver hours to fashion 35 maple leaves, each containing a relief carving of an important person, place or event



PHOTOGRAPH BY MICHAEL FINKELSTEIN

This nested set of bowls by Michael Finkelstein resides at the Royal Ontario Museum.

home of Maple Cottage in Toronto's Leslieville, was "*The Maple Leaf Forever tree*" apparently sprang up in the early 1900s. It is impossible to verify the truth of this belief since the tree was so rotten on the inside that foresters could not count the rings, according to Rob McMonagle, senior advisor, economic development for the City of Toronto. Still, the home of the massive tree was designated an official historic site by the City in 1992 and the silver maple itself is generally accepted to be the famous tree.

To honour its significance, the trunk and branches were salvaged and donated to local artisans, carpenters, designers, millworkers and woodturners to be recreated as community art and cultural pieces for display in museums, historical institutions and public buildings across Canada and beyond our borders. Over 400 unique pieces are

guitars
(one
acoustic,
one electric)
fashioned from
Maple Leaf Forever

(MLF) wood. The guitars will likely be provided (in trust) to aspiring Toronto musicians for one-year terms.

On that fateful July day, eco-woodturner Michael Finkelstein heard from a friend that the famous maple tree had fallen and rushed over to the site. He wanted the opportunity to re-



PHOTOGRAPH BY CHARLES ISCOVE

What remains of the majestic Maple Leaf Forever tree.



PHOTOGRAPH BY EMMA PERLAKY

Carving of the Maple Leaf Forever tree trunk by Ontario Wood Carvers Association volunteers is still in process

in Toronto's history. Historians from Archeological Services Inc. and Heritage Toronto provided assistance in choosing the subjects. To ensure that members of the association from across the province had a hand in this

momentous project, 20 round discs from the MLF tree were sent to 20 remote carving clubs. Carvers from each member club will incorporate a local piece of history into their disc. The 20 discs will come together in a carved "quilt." Its final resting place has yet to be determined.

Dixon Hall's Mill Centre – a social enterprise that provides carpentry and skilled trades training to youth at risk while manufacturing custom wood products – was commissioned to refurbish the speaker's podium at the City of Toronto, using MLF wood. The wood was also used to produce bookstands for the Toronto Public Libraries as well as a limited run of commemorative bookmarks. The MLF logo and the story of Alexander Muir and the great tree are laser-etched into the bookmarks.

Woodworker and designer Rob Green took the last of the sticks, twigs and a garbage bag full of dry leaves back to his workshop from the Maple Leaf Forever Branches Project. What he created from these pieces is memorable. He imagined the rustling of

the leaves on the living tree and, using this as inspiration, created a hanging wall sconce that he named "Rustle." There's a self-contained LED unit within the sconce that allows soft light

to filter through the leaves.

Much later, Rob was given more substantial lumber from the tree and created the Keela console table, one of the culturally significant furnishings going into the renovation of Canada House in Trafalgar Square in London, England. The table doesn't look like conventional maple; Rob used a natural finishing technique that brings out the greys, greens and blues in the wood.

In a collaborative effort to promote urban wood design and support urban forestry projects, the City of Toronto is working with LEAF and Ontario Wood on a Maple Leaf Forever Tree exhibit at the Green Living Show in March. Over a dozen designs using MLF wood will be on display at the entrance to the show. "Rustle" will be one of the pieces auctioned off, with proceeds used to fund LEAF's reforestation initiatives in the city.

Rob Green loves the way using the MLF tree connects the Toronto



PHOTOGRAPH BY EMMA PERLAKY

Detail from the OWCA work depicting Canada's fur trade

neighbourhood where it grew with the country's history. "I'm proud to be a part of the tradition of woodworking in Canada. Through the MLF project and all the artisans involved, this

Continued on page 14

Continued from page 13

special old tree has been both renewed and remade.”

In June 2013, in a special ceremony, a sapling from the seed of the Maple Leaf Forever tree was planted at Todmorden Mills Heritage Site, the location of Upper Canada's first paper mill. Please consider making a donation to LEAF's Urban Forest

Fund at www.yourleaf.org/make-donation or the Toronto Parks and Trees Foundation campaign, See the Forest for the Trees, www.torontoparksandtrees.org/maple-leaf-forever, to support the continual replanting of the city's tree canopy.



PHOTOGRAPH BY ROBERT GREEN

Rustle

Calendar of Events

February 19-20, 2015

2015 LAND AND WATER SUMMIT

Albuquerque, New Mexico

Sponsored by the Xeriscape Council of New Mexico,
www.xeriscapenm.com.

February 21, 2015

WILD ONES 2015 DESIGN WITH NATURE CONFERENCE –
CHANGING TACTICS

Minneapolis, Minnesota

Nationally recognized landscape architect and ecologist Trevor Beck will be the keynote speaker, discussing how he designs successional landscape communities that adapt to change and disruption.

Visit www.wildones.org for details.

March 22, 2015

OUR SPRING WILDFLOWERS AND THEIR WESTERN U.S.
RELATIVES

Marshall, Virginia

Free lecture presented by the Piedmont Chapter of the Virginia Native Plant Society.

Details at www.vnps.org.

May 28-31, 2015

FLORIDA NATIVE PLANT SOCIETY CONFERENCE

Tallahassee, Florida

Visit www.fnps.org/conference.

June 3-6, 2015

NATIVE PLANTS IN THE LANDSCAPE CONFERENCE

Millersville, Pennsylvania

Online registration opens March 16, 2015,
www.millersvillenaiveplants.org.

June 5-7, 2015

NEW ENGLAND BOTANICAL CLUB RESEARCH CONFERENCE

Northampton, Massachusetts

Visit conference@rhodora.org for more information.

For NANPS Events go to page 3.

Remembering Carol Rykert

In 1997, at the NANPS AGM at the Toronto Botanical Garden, Joan O'Reilly raised the question, "What is NANPS doing to stop the clear cut logging of old growth red and white pine in Temagami forest?" The embarrassing answer was "Nothing."

I quickly devised a plan: NANPS would host a three-day international art camp at Temagami for the following year. I invited 22 of North America's best wilderness artists to come and paint the wilderness landscapes they saw there.

The following week I received a surprise phone call from Carol Rykert, offering to underwrite the entire project including transportation, food and lodging, float aircraft and boats to take artists to the interior, the publication of a 32-page colour art catalogue and honoraria for all artists.

The almost 100 works of art were exhibited at the Arts and Letters Club and the Temagami Town Art Gallery. All works sold quickly, raising \$10,000 for the society. The art catalogue was sent to all Ontario MPPs (Members of Provincial Parliament) with the message that the Temagami forest was too ecologically important to be logged out. The subsequent media outcry, with input from NANPS and allied conservation groups, brought the proposed logging in Temagami to a close.

Carol Stavert Hudson Rykert, who passed away in November, 2014, was a supporter of local literary, medical and arts groups, including the Blue Mountain Foundation for the Arts and the Georgian Triangle Lifelong Learning Institute. Carol also served as a NANPS honorary director. In 1967, as her centennial project, Carol introduced native plants to the family property in Collingwood, Ontario.

Her philanthropy and passion for old-growth forests will be remembered and missed by kindred spirits.

Even in the toughest of times, the arts provide, at the very least, a spark of hope and inspiration.

Anonymous, *Globe & Mail*, Jan. 3, 2015

Jim Hodgins

Jim was the editor of Wildflower magazine for 20 years.

WHEN IS A 'FLOWER' NOT A FLOWER? AND OTHER INTRIGUING QUESTIONS ABOUT PLANTS

By Larry & Carol Peterson

This unique full-colour book takes common observations of plants and presents scientific explanations for them that the non-specialist can understand. Using a question-and-answer format, the authors pose 140 questions and provide the answers, illustrating them with striking images. 450 images. Purchase the book at www.volumesdirect.com.



New York ironweed
(*Vernonia noveboracensis*)

ASK AN EXPERT

Send us your native plant/ecosystem questions and conundrums. At the North American Native Plant Society, we can draw upon a wealth of native plant knowledge and experience to help you with gardening challenges or plant identification in the wild. Email your questions to editor@nanps.org or leave a voice mail message at 416-631-4438.

Continued from page 1 – **Snow Trillium**

but more commonly by meligethine sap beetles. Though the beetles are visibly dusted with pollen, other researchers have found that these beetles rarely travel from one flower to another; hence they are more likely pollen predators than pollinators.

The flowers can last for nearly two weeks. Once pollination is successful, the fruits recurve and disappear beneath the leaves. By mid-June, as fruits mature and dehisce to release seed, the aboveground growth rapidly dies back. By late June, a botanist

would find no evidence that the plants were there.

Fred Case noted that snow trillium may freeze solid over a period of below freezing nights but continue to flower and set fruit showing no appreciable damage. Skunk cabbage (*Symplocarpus foetidus*) emerges almost as early in the season, but this happens due to a sugar reserve burned to generate heat that melts snow around the plant and enables such early anthesis (the period during which a flower is fully open and

functional). Snow trillium has no such capacity, although botanist F. M. Andrews in 1921 suggested the trillium did somehow cause snow to melt. He claimed to have seen hollow domes over individual plants where

snow had melted when he excavated the plants to inspect them.

Within its wide range of distribution, plants and flowers of snow trillium may vary a great deal. Fred Case came to this conclusion after growing what he referred to as the Indiana form and a form from Michigan in his garden. He found the Indiana form was more vigorous and set seed better than the Michigan form. He noted that the Indiana form produced many seedlings and expanded in his garden while the Michigan form produced few viable seeds and quickly disappeared. It is the Indiana form which most closely resembles its larger relative *Trillium grandiflorum*.

Of spring, Emily Dickinson said, "A light exists in Spring/ Not present on the Year/ At any other period—When March is scarcely here." Although Dickinson was speaking of the season, we feel the sentiment applies equally to this charming harbinger of spring.

Stephen Johnson and Mary Stark became enthralled by the genus Trillium after seeing a roadside hill covered with flowering white trillium near Spooner, Wisconsin.



Snow Trillium (*Trillium nivale*)



WINTER 2015

NANPS MEMBERSHIP

New membership Renewal

Change of Address Gift

- _____ 1-year regular membership: **\$25**
- _____ 2-year regular membership: **\$40**
- _____ 3-year regular membership: **\$60**
- _____ 5-year sustaining membership: **\$200** (includes \$100 tax receipt)
- _____ Full-time student membership: **\$10**

Name of institution _____

_____ Paper edition of *The Blazing Star* Include \$5 per year to cover mailing costs

_____ 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

If you are not receiving *The Local Scoop*, our entertaining and informative e-newsletter, subscribe: thelocalscoop.org/subscribe/.

Send this completed form along with your cheque to:

NORTH AMERICAN NATIVE PLANT SOCIETY
PO Box 84, Stn D
Toronto, Ontario, Canada
M9A 4X1

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

P.O. Box 84, Station D
Toronto, Ontario, Canada
M9A 4X1

