

The Blazing Star



NEWSLETTER OF THE NORTH AMERICAN NATIVE PLANT SOCIETY

Native Plant to Know

Squirrel Corn

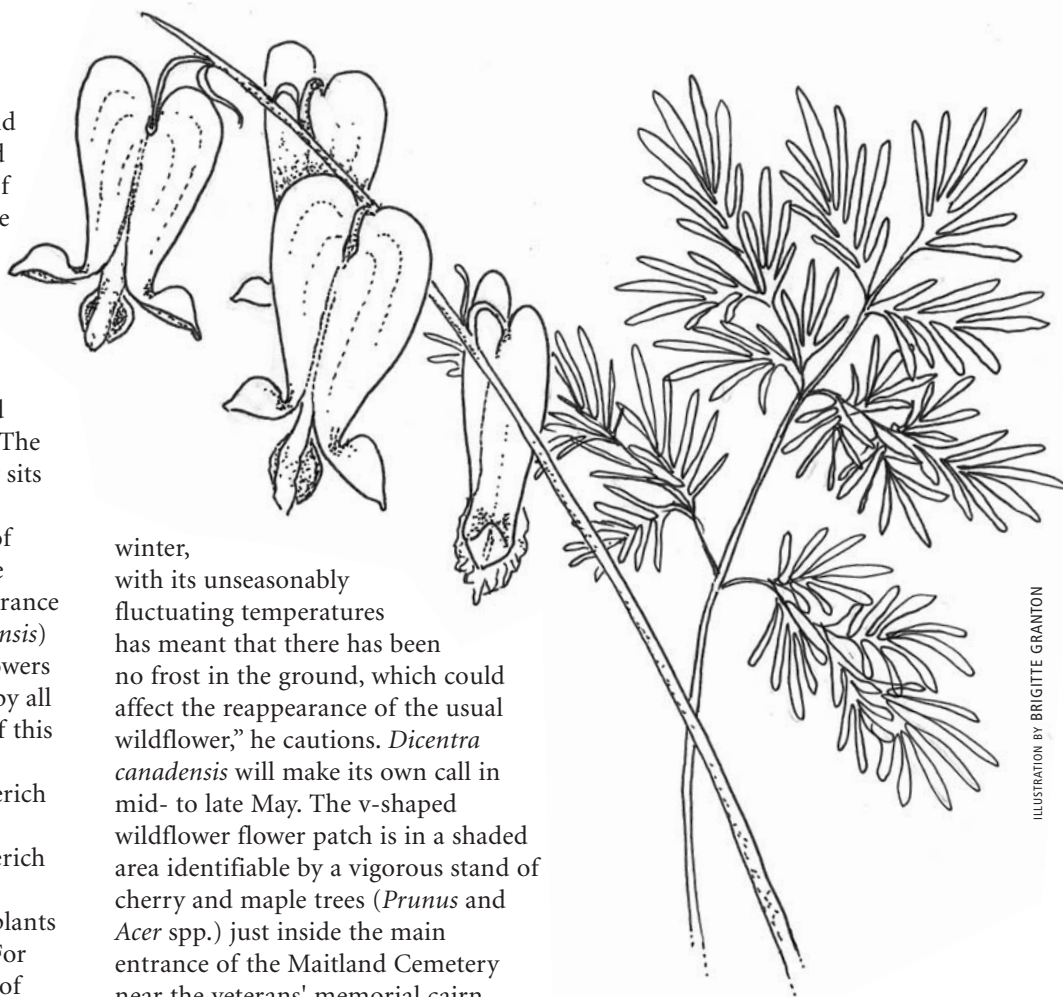
Dicentra canadensis

by Catherine Macleod

In Goderich, Ontario, a tornado destroyed much of the natural and built heritage – including beloved public green spaces – in August of last year. Now that Mother Nature has forced the entire community back to its natural drawing board, the planned development of a self-guided wildflower walk around the perimeter of Goderich's Maitland Cemetery will be most welcome. The heritage- and flora-rich cemetery sits on land adjacent to the beautiful Maitland Trails and valley, both of which were devastated during the tornado. This spring, the reappearance of squirrel corn (*Dicentra canadensis*) and a host of other native wildflowers at the cemetery will be heralded by all who enjoy the natural wonders of this shaken area.

Under the stewardship of Goderich Parks and Cemeteries Supervisor Martin Quinn, the Town of Goderich and its citizens are already in the process of listing much-awaited plants in the recently devastated areas. For Quinn, squirrel corn is a symbol of hope and renewal. "*Dicentra canadensis* will be the first sign of wild nature regaining her balance if she shows in May this year," he says.

"The lack of snow covering this



winter, with its unseasonably fluctuating temperatures has meant that there has been no frost in the ground, which could affect the reappearance of the usual wildflower," he cautions. *Dicentra canadensis* will make its own call in mid- to late May. The v-shaped wildflower flower patch is in a shaded area identifiable by a vigorous stand of cherry and maple trees (*Prunus* and *Acer* spp.) just inside the main entrance of the Maitland Cemetery near the veterans' memorial cairn.

Quinn pointed to the rare, diminutive *Dicentra canadensis* (less commonly known as bleeding heart) last May on a casual walk through the

cemetery. Immediately, I saw a likeness to its larger and abundant relative *Dicentra cucullaria*, the fancifully – but

ILLUSTRATION BY BRIGITTE GRANTON

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The *Blazing Star* is . . .

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NANPS NEWS

NANPS ANNUAL PLANT SALE

SATURDAY, MAY 12, 2012

10AM - 3PM

Markham Civic Centre

101 Town Centre Blvd.,

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Friday, May 11 and for cleanup on
Saturday, May 12.

E-mail plantsale@nanps.org or
voicemail 416-631-4438.

BIODIVERSITY WORKSHOP SATURDAY MAY 5, 2012

SHINING TREE WOODS EXCURSION SATURDAY, JUNE 2ND, 2012

CHARTER BUS LEAVING TORONTO FROM WILSON SUBWAY STATION AT 8 AM.

EXCURSION: A rare opportunity to visit NANPS premiere conservation property in Norfolk County, Ontario and make your contribution to the vitality of this valuable forest. NANPS Conservation Team has been working hard to control an invasion of garlic mustard that threatens the integrity of Shining Tree Woods. Join the Team for a fascinating outing that promises to be educational and immensely rewarding.

Following a fun few hours in the woods, we'll continue on to St Williams Nursery & Ecology Centre for a thank you supper and a tour of their facility. **(Earn 3 volunteer hours for each bag of garlic mustard removed and 2 hours for every 20 species mapped toward NANPS 2012 Members Challenge)**

WORKSHOP: BIRKDALE COMMUNITY CENTRE, SCARBOROUGH, ONTARIO 9:30 AM-1 PM

Excursion participants are invited to explore biodiversity, the problems caused by invasive species, vegetation mapping techniques, and other conservation activities that will be put into practice during the excursion. Weather permitting, we'll end with a tour of a nearby ravine. Please join us for an educational and fun experience! Refreshments included. (Earn an additional 5 volunteer hours)

Preliminary trips to Shining Tree Woods taking place in April & May to clear satellite populations of garlic mustard and set up transects for the June excursion. If you'd like to join NANPS Conservation Team on one or more of these trips, email land@nanps.org. No experience is required, but if you have some expertise to share, please let us know. Smart phones with GPS capability and/or advice on purchasing additional GPS units also wanted!

The cost is only \$15 for the tour & workshop. Space on our last formal tour of Shining Tree Woods in 2004 sold out quickly. Visit www.nanps.org for more information and email land@nanps.org or call (416) 631-4438 to register. **Self drive option also available.**

Please help NANPS fulfill its goal of 400 volunteer hours during this trip! Can't join us? Participate in a restoration activity near you or send a pledge of financial support for each bag of garlic mustard to nanps@nanps.org. In 2011, 45 bags of garlic mustard were removed.

A River Runs Under It

by Soraya Peerbaye

Our garden began with the rumour of a river. When we moved in, in 2006, our neighbours warned us that the south end of the garden would be drenched after rains and snowmelts. Houses on the street were particularly susceptible to flooding; the folklore was that, at one time, after rainstorms, residents would find small fish floating in their basements.

Our house is on Merrill, a crooked street in Toronto's east end, close to Woodbine and Danforth. The property slopes downward, so that while the front entrance is at street level, the back doors on the main floor open onto a balcony overlooking the garden. You can extend your arms and almost touch the branches of the paper birch (*Betula papyrifera*) that grows close to the easterly fence; an old elm (*Ulmus americana*) in our westerly neighbours' garden has given us generous shade.

The trace of the creek, once you imagine it, isn't hard to discern.

Certainly we could see, during the spring rains that first May, how green puddles form in a diagonal across the far end of our garden and into our neighbours'. In the fall the puddles become oblong ponds that fill with dead leaves, then turn tea-coloured and boggy. And in winter, on milder days, the snow along that line softens and greys, like an X-ray of a spine; mist rises from it like a ghost.

Still, for a long time I was an agnostic on the subject of lost rivers. It was difficult to imagine another landscape, especially in the summer when the water evaporated and left the ground baked and hardened. As romantic a notion as it was, I rationalized away the idea of the creek. More likely, I figured, it was the slope of the property that led to an accumulation of moisture. If there had been a creek, I told myself, it had probably been the merest trickle, a thread, nothing that would have sustained a riparian ecology. And it had long since been buried.

So when I began gardening, I did so

thinking in terms of qualities of soil and light. I did not think of the garden as a habitat or consider its possible ancestry. The previous owners had tended a garden that mixed the traditional non-native shade plants with a few natives: common blue violets (*Viola papillonacea*) that flourished as groundcovers at the base of the birch and elm, and ostrich ferns (*Matteuccia struthiopteris*) building their green, rustling temples at the far end. I had already made a decision to try my hand at gardening with native plants, wanting to support wildlife in some small way. Without much remorse, my husband and I cut down or uprooted the non-natives.

Having lived by urban alleyways, highrises and streetcars for a decade, I thought of our garden as dappled and sunlit – my first mistake. My second: I disdained the wet patches of the garden altogether and turned my attention to the moist, crumbly earth elsewhere. Eager to attract butterflies, I went to my first NANPS sale to purchase showy wildflowers that I thought would be satisfied in these conditions: black-eyed Susans (*Rudbeckia hirta*), blue vervain (*Verbena hastata*), butterfly weed (*Asclepias tuberosa*), Culver's root (*Veronicastrum virginicum*), Michigan lily (*Lilium michiganense*), New England aster (*Aster novae-angliae*) and wild bergamot (*Monarda fistulosa*).

They reluctantly held their position for the summer, but refused to grow; in fall, they sulkily disappeared. I had to accept that the green shade beneath the elm was, nonetheless, shade. And so, chastened and wiser, I returned to the next sale to buy woodlanders, beginning with red and white baneberries (*Actaea rubra* and *pachypoda*), Solomon's seal (*Polygonatum biflorum*), bloodroot (*Sanguinaria canadensis*), foamflower (*Tiarella cordifolia*), golden alexanders (*Zizia aurea*) and wild ginger (*Asarum canadense*).



PHOTOGRAPH BY CITY OF TORONTO ARCHIVES; THANKS TO JOANNE DOUCETTE.

Bridge over creek crossing Danforth Avenue, 1912.

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That year, perhaps sensing that the oppressive hostas of the previous owners had been banished, a few other native species appeared unbidden: jewelweed (*Impatiens capensis*), which carpets the ravine southwest of us in late summer, and the mottled leaves of trout lily or *Erythronium americanum* (though I've yet to see them flower).

That's when I started paying attention. Whatever had been here before, I realized, was not dead, but dormant, and wanting to return. Next summer, in company of the jewelweed,

I made a patch of delicate but extravagant spring flowers close to the house: specimens rescued from the woodlot in the path of extension of Highway 404 such as red and white trilliums (*Trillium erectum* and *grandiflorum*), the lovely, wilting yellow of bellwort (*Uvularia perfoliata*), and the irresistible Jack-in-the-pulpit or *Arisaema atrorubens* (I describe it to my daughter as the plant that goes "Hurray!"). I also planted yellow lady's slipper (*Cypripedium calceolus*), a splurge I allowed myself

the fence; contractors dug fresh holes for the new posts. After they'd gone, I worked through the remaining mounds of earth and found whole and broken shells, some cap-shaped and ridged, others rounded, smooth and cone-shaped, all bleached with age. The earth was now mixed with shells, water-smoothed pebbles and the occasional chunk of quartz.

I took a closer look at the ravine where a creek emerges to flow above ground. You can hear it through the nearby manholes, though by sight and



Bloodroot at the base of the elm tree.

I planted great blue lobelia (*Lobelia siphilitica*) and cardinal flower (*Lobelia cardinalis*) – taking a chance with the latter, which I guessed required more sun than I had. It flowered, gamely – but it was the blue lobelia that began to wander expansively across the south end.

Over the years I tested the greenness of my thumb with other woodlanders.

one year at the sale. Maidenhair fern (*Adiantum pedatum*) and early meadow rue (*Thalictrum dioicum*) bookend the bloodroot. Virginia bluebells (*Mertensia virginica*), planted beneath the birch, have become my favourite flower: the buds with their mauve-blue like shot silk are the first to pierce the ground in spring.

Two springs ago, we had to replace

though by sight and sound it had always seemed to me that its trajectory ran perpendicular to the buried creek I was now beginning to believe in. I thought about the surrounding terrain, and how varied it was with little hills and valleys, trying to imagine what divergent paths water could take.

Finally last spring I contacted the Lost Rivers Society. Helen Mills confirmed that the above-ground creek running through the ravine was Small's Creek, which merges with Tomlin Creek

further south near Queen Street. Small's Creek, she informed me, rose near Woodbine and Danforth and flowed through East Lynn Park.

Helen's colleague John Wilson pointed out features I had never thought to note: in particular that Merrill East and West are linked by a little section of paved road called Merrill Bridge, which crosses Small's

Creek. John wrote: "I'd love to know whether Merrill Bridge refers to a bridge that was buried and is still under the street – there are two bridges buried in the west end along Garrison Creek."

John continued: "I don't know whether a specific smaller stream may have run through your yard and into the main stem – it's entirely possible. You actually live right on the face of the Lake Iroquois Baymouth Bar [...], a gravel deposit from the end of the last ice age that would have retained groundwater aquifers that emerged at many locations – headwater streams, if you will, for a creek like Small's. One may be on your property. The height of the Baymouth Bar is very obvious just across Woodbine from you, where you climb the stairway onto Oakcrest – that's a remarkable name for the street. I don't recall any oaks [*Quercus* spp.] still along the street...but there

certainly are in Norwood Park, which is also the height of the Baymouth Bar farther south."

This email exchange immediately transformed my sense of where I lived. If, like me, you've given your friends directions to where you live by naming subway stations, pubs or laundromats, it's radical to suddenly say, "We're right across the Lake Iroquois Baymouth Bar."

I spent the rest of that spring staring at the features of my neighbourhood with curiosity. John suggested that it might once have been an oak-maple forest community similar to High Park, with Carolinian features in the creek valleys. His comment about the street name Oakcrest reminded me that there were a couple of other street names that might refer to native plants: Woodbine, in fact, is another name for Virginia creeper (*Parthenocissus quinquefolia*), and

Columbine Avenue is a street off Woodbine further south.

If it's difficult to imagine an ecosystem around a thin spittle of water, it helps to talk to someone like Joanne Doucette, a local historian. Joanne described a vivid image of pre-colonial Toronto: tended rice beds in Ashbridge's Bay and long houses in Withrow Park. In her self-publication *Pigs, Flowers and Bricks: A History of Leslieville to 1920*, she notes features of pre-colonial landscapes that would have been significant to Aboriginal people: "Brooks that we think could hardly support minnows were home to valuable trout and salmon streams. Creeks were wider and deeper before settlement; deforestation changed the habitat and lowered the water table."

Inspired by these revelations, my dream of creating a shade garden became more specific, and I began

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In Memoriam: Lorraine Brown 1949-2012

A beloved member of the Grey County naturalist community, Lorraine Brown passed away in January at the home she shared in Leith, Ontario with her husband Andrew Armitage and their cats, books, gardens and music. An enthusiastic native plant gardener and founding president of the Owen Sound Field Naturalists, Lorraine wrote several articles for *The Blazing Star* over the years. She served on the boards of Ontario Parks, Grey Sauble Conservation Authority and its Foundation, and the Bruce Peninsula Bird Observatory. With a degree in biology from Queen's University and, many years later, a Masters in Environmental Studies from York University, Lorraine worked for the Ontario Science Centre and the Canadian Museum of Nature in Ottawa. Her company, Apropos Planning, specialized in creating museum exhibits. In her last four years she rekindled her love of playing music, composing songs and performing with two women's bands, The Amabelles and O'Various. Lorraine requested that memorial donations be made to the Conservation Fund of the Owen Sound Field Naturalists.

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researching plants of the Carolinian woodland. To my herbaceous collection I added black cohosh (*Cimicifuga racemosa*) and twinleaf (*Jeffersonia diphylla*). Researching spicebush (*Lindera benzoin*), I fell in love with the images of small yellow flowers pressed to the otherwise bare, reddish branches in spring; I planted three; male and female plants are needed to flower, and given that I couldn't determine the sex of the ones I purchased, I figured my odds of having both were better with three specimens. I longed for wood poppy (*Stylophorum diphyllum*) and last spring was the happy recipient of the overgrowth of these yellow beauties in Alice Kong's garden.

Sadly, my dream to recreate a garden with echoes of a Carolinian woodland has been interrupted. Late this spring, we realized our neighbours' elm was in trouble. Over the summer we saw the signs of Dutch elm disease: pale, stunted leaves that wilted and fell early, peeling bark, and a clear, sticky substance dripping from the canopy. Much to my chagrin, the bloodroot leaves under the tree turned bronze and crisp as kettle chips, but other flowers shot upwards. Along the buried creek's profile, the lobelias,

which had only been up to my knees, now came up to my waist, their purple-blues more vibrant than ever. They mixed with the jewelweed, which grew bushy, the creamy green stalk thick and the dainty orange blooms plentiful. ("They look like goldfish!" said my three-year-old daughter in delight.) Meanwhile the Culver's root planted five years ago emerged and grew to my full height, as did a solitary and proud Michigan's lily.

Recently I read an essay by poet Gary Snyder, entitled *Reinhabitation*, in which he describes his efforts to learn of a place's Old World history; to know its people, plants, and creatures, its watershed and soil. "[Knowing] who we are and where we are are intimately linked," he writes. His words explain for me the feeling of holding a handful of dirt-streaked shells from my garden, and understanding what had been here before. Or the feeling of deep pleasure of sitting with my daughter, in late summer, by flowers of yellow hyssop (*Agastache nepetoides*), and watching the bumblebees contentedly gathering pompoms of pollen on their black legs.

Perhaps Snyder's words also explain our sadness at the impending loss of the elm. I have seen three more barren

elms in the neighbourhood, their silhouettes strange and wintery in the otherwise green summer, and one being taken down limb by limb. The loss feels communal. I imagine, too, that the elm holds memories of riverine life in its roots and rings, and so the loss is also temporal.

As a consolation, my current project is to grow shrubs and small trees. Through LEAF (Local Enhancement and Appreciation of Forests), I've purchased a downy serviceberry (*Amelanchier arborea*), highbush cranberry (*Viburnum trilobum*), arrowwood (*Viburnum dentatum*) and meadowsweet (*Spiraea latifolia*). Overhead wires will make it difficult for us to plant a large tree once the elm is cut down, but I hope the garden will in time will grow dense with foliage, flowers and berries, providing shelter for small creatures and tranquility for us. And become habitat. Now, once again, I am re-imagining my garden.

Soraya Peerbaye is a writer whose first collection of poetry, Poems for the Antarctic Advisory on Antarctic Names, was nominated for the Gerald Lampert Award.

Calendar of Events

May 18, 2012

7TH ANNUAL NATIONAL ENDANGERED SPECIES DAY CELEBRATING AMERICA'S WILDLIFE LEGACY

Across the United States

Endangered Species Day offers botanical gardens, zoos, natural history museums, schools and other groups an opportunity to educate the public about the importance of protecting threatened/endangered plant and animal species. Each year, tours, exhibits, presentations and other events/activities are held throughout the country. Visit www.endangeredspeciesday.org.

June 6 & 7, 2012

SEDGE IDENTIFICATION WORKSHOP

Caledon, Ontario

Organized by the Toronto and Region Conservation Authority (TRCA), this workshop consists of in-class lectures and outdoor excursions. For information go to:

<https://events.trca.on.ca/sedge-identification-workshop-c188.php>.

June 10-14, 2012

BOTANICAL SOCIETY OF AMERICA JOINT FIELD MEETING

Slippery Rock, Pennsylvania

Contact Nan Williams, 413-339-5598 or E-mail: nnwrowe@gmail.com

June 11-16, 2012

ISLE ROYALE BOTANY WORKSHOP

Isle Royale National Park, Michigan

Learn to identify early-season plants with botanist Janet Marr. For more information visit the Isle Royale & Keweenaw Parks Association website at irkpa.org.

July 27-29, 2012

FOURTH ANNUAL MIDWEST NATIVE PLANT CONFERENCE

Dayton, Ohio

Organized by the Midwest Native Plant Society – www.midwestnativeplants.org.

(For NANPS events visit page 2)

Digging in for Reptile Recovery

by Gregor Beck

Carol and Mitchell (the names were changed to protect wildlife habitat and species at risk!) were keen gardeners and naturalists when they moved from the city to a 20-hectare (50-acre) farm in Norfolk County, a few miles inland from the north shore of Lake Erie in southern Ontario. The expanse of sandy soil (formerly tobacco fields) was an exciting canvas for future gardens and wildlife habitat – and the woodlot at the back of their property illustrated the sorts of habitats and micro-habitats they might emulate. The couple hoped to attract wildlife but the diversity of fauna they attracted in a few short years far exceeded their expectations. It seems that birds, butterflies, reptiles and amphibians are proving the old adage that if you build it, they will come!

Mitchell and Carol's endeavours include the restoration of four hectares (10 acres) of Carolinian forest contiguous with their woodlot, but on a smaller scale they have also installed native plant gardens to attract birds, butterflies and other pollinators throughout the seasons. Carol had a strong interest in helping the region's imperilled turtles and snakes and it was this interest that put her in touch with Long Point Basin Land Trust (LPBLT), a charitable non-governmental organization which protects and restores natural habitats and biodiversity in the Carolinian Region of southern Ontario.

Responding to an urgent need to halt the decline of snake and turtle populations in the Carolinian Region, LPBLT has developed a multi-faceted conservation initiative. The situation is dire: six of the area's seven turtle species and half of the snakes are listed officially "at risk," a common concern across Ontario and beyond. Over the last few years, Carol has become one of LPBLT's most active volunteers, documenting reptile sightings for the group's reporting program which helps inform practical

conservation solutions. She has also volunteered to survey local roads for reptiles in efforts to identify problem areas; occasionally, she is able to rescue turtles or snakes and shepherd them to safety off the road.

While numerous threats abound for reptiles, there are many things gardening enthusiasts can do. If you want to help reptiles – or other fauna – the simplest and most effective approach is to try to replicate the

expanding natural areas.

- Retain woody debris, brush piles and leaf litter. Organic matter enriches the soil and provides hiding places for most species of reptile at various times of the year – even providing protection from the cold (or excessive heat).
- Create safe basking sites. Since reptiles obtain their required body warmth from their environment, the presence of basking sites for sunning



PHOTOGRAPH © GREGOR G. BECK

The Eastern Hog-nosed Snake can be found in a variety of habitats, but often winters in a hole dug in sandy soil. The Eastern Hog-nosed Snake is harmless to humans, but the species has various defensive strategies which may appear menacing, such as spreading flat the neck, gaping its mouth, hissing and even rolling over and playing dead.

natural biodiversity, habitats, micro-habitats and natural systems typical of one's geographic region.

To help create habitat for reptiles and other wildlife, use these tips when planning a garden:

- Restore the plant diversity suitable for your property, including site-appropriate native herbaceous plants, shrubs and trees. Many wildlife species, including snakes and lizards, seek shelter, hunt or bask in branches, so try to create structural and biological diversity.
- Make natural connections: create wildlife corridors between natural areas and buffer sensitive habitats by

is vital. For snakes or small lizards, basking (and hiding) sites can be created with brush piles or mounds of cobble stone or other material.

- Create and maintain large compost piles as nesting sites for egg-laying snakes and other reptiles. Many snake species, including Eastern Foxsnake, Gray Ratsnake and Milksnake, lay their eggs in decomposing vegetation, decaying stumps or other composting organic matter. These micro-habitats were common in old-growth forests, but the scarcity of old growth in human-altered landscapes highlights the importance of creating

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alternatives.

- Create turtle habitat. If you have a pond, leave it as natural as possible, allowing edges to become vegetated with native plants, shrubs and trees. Install a sand or sand/gravel pile nearby to provide a safe nesting areas for turtles; install a buried weed barrier (i.e. garden centre fabric cloth) 40 centimetres (15 inches) below the top of the sand mix to reduce growth of plants onto the sandy area (direct sun warms the substrate and helps in egg incubation).
- Create or enhance water features on your property. Water is a natural draw for virtually all fauna. Plant aquatic and emergent plants, and install other features such as sandbars, bird and bat houses to promote greater biodiversity. Anchoring a log offshore can provide safe basking sites for turtles.
- Where space permits, create over-wintering habitat for snakes. In colder climates, many snakes retreat to underground wintering chambers called hibernacula. Building a hibernaculum is a specialty project, involving the use of a backhoe to ensure that it is sufficiently deep and that the bottom-most chamber is below the frost line.

A few seasonal tips and cautions specific to the gardening world are worth mentioning:

- Avoid the temptation to work your soil too early in the spring (either by hand or tilling) since some reptiles (e.g. hatchling turtles from the prior year or Hog-nosed Snakes) as well as amphibians (e.g. American Toad) may over-winter in the soil and be harmed inadvertently.
- If you have a particularly active large mulch pile, avoid disturbing it during the summer months in case an egg-laying snake (or even turtle or lizard) has chosen your compost to lay its eggs. Similarly, if a turtle decides to lay its eggs in the middle of your vegetable garden, be nice



PHOTOGRAPH © JOE CROWLEY

Many reptile species are reliant on wetland habitats for all or part of the year. The threatened Blanding's Turtle prefers swamps, ponds, marshes and moist forests, and is easily recognized by its domed shell and bright yellow throat. The more familiar and widespread Midland Painted Turtle can be found in small ponds and other wetlands; it is best recognized by the colourful striping on its neck and shell. Female turtles leave wetlands in late spring or early summer to find a place to lay their eggs. Motorists should drive cautiously and slow down near natural areas such as wetlands and woodlands to avoid hitting reptiles (and other wildlife) on roads.

- and share the space.
- Some garden products can be hazardous for snakes. For example, the garden netting used to discourage birds from landing on fruit trees or small meshed chicken wire can ensnare snakes causing their slow and painful death. For beans and peas, install netting above the ground so that snakes can pass underneath – or use trellises or other approaches. Avoid leaving mesh products, chicken wire or similar hazards on the ground.
- If you or others in your home are leery about snakes, just step back and give them a chance to leave on their own. Most snakes – and other reptiles – are very shy and willingly retreat.

The efforts of indigenous plant gardeners to recreate habitat also promote stewardship of the land and

species-at-risk recovery by offering a template for other naturalists and native plant enthusiasts. As for our less nature-friendly neighbours – they might just be convinced to protect reptiles when they recognize their pest-control skills!

Gregor Beck is LPBLT's Director of Conservation Science. To learn more about LPBLT's Conserving Carolinian Reptiles project, visit www.longpointlandtrust.ca which includes information on how to create reptile habitats, such as hibernacula and nesting structures. Please support LPBLT's conservation efforts through the purchase of their biodiversity handbooks: Gardening with Native Plants (\$5 plus S&H) and Conserving Carolinian Reptiles (\$10 plus S&H). Email nature@longpointlandtrust.ca.

Moving Beyond Purple Coneflower

by Grant Dobson

They say that things happen for a reason. When we built our house in eastern Ontario 25 years ago, little did we know what would happen two decades down the road... and the possibilities it would open up for us.

Our site was bordered to the north by a dense evergreen forest with a few mossy rocks peeking out from under years of accumulated leaf litter. The rocks were scattered along the crest of a hillside where the century-old cedars grew. Over the years we established various native habitat gardens but left this area alone, lamenting the fact that we didn't have an appropriate site for a rock garden.

On our farm, near the southern edge of the Canadian Shield, bedrock is often not far below the surface and we suspected that what lay just under these few craggy marble rocks held some garden potential. But with virtually no sun reaching the ground and no desire to cut the trees, we left it as a wooded rocky grove.

On July 4th, 2006 this all changed. I never expected to experience a tornado first-hand and would never wish this experience on anyone. At 1 p.m. the sky in the west turned an eerie green. In a matter of minutes our beloved grove of 100-year-old white cedar was gone. The carnage of splintered and uprooted trees lay stacked up like cordwood across the slope. How could we ever restore the site?

By mid-October, with the shock of

the tornado's destruction behind us, and a little down time on the farm, we were set to make an attempt. After we had spent many hours clearing branches and cutting firewood, we enlisted the aid of a backhoe operator to pull the larger stumps and lower the

might ponder them for the next five months.

We made lists and sorted them based on flowering dates, colour, height, light and moisture requirements. Taking time to research all this kept our passion for gardening



PHOTOGRAPH BY GRANT DOBSON

Wild ginger (Asarum canadense) with marginal shield fern (Dryopteris marginalis)

soil profile at the bottom of the slope. This done, we began to carefully wash away the final layers of soil with a garden hose. Gradually the ancient rock surfaces with their many nooks and crannies were exposed.

With winter fast approaching, we

took a panoramic series of digital images of our new-found landscape. These we taped together on a bulletin board so that we

alive through till spring. We took advantage of many resources from field guides to internet sites to local field naturalists clubs. Post-it notes in a rainbow of colours became our flowers and the tack-board our garden. These were moved and shifted about as we envisioned the ideal design.

We imagined combining fine and bold foliage plants and considered the implications on mood of cool- and bright-coloured flowers. It turns out that our natives are heavily weighted in favour of the cool palette. Many are

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Congratulations to Alison Yew of Pearl River, New York for winning the NANPS membership renewal draw!

PHOTOGRAPH BY GRANT DOBSON



Encrusted saxifrage (Saxifraga aizoon) with purple-stemmed cliffbrake (Pellaea atropurpurea)

subtle and unassuming, perhaps not unlike that stereotypical Canadian. From our perspective, this was a good thing as we wanted to create a relaxing space for reflection.

There is a diversity of opinions on what constitutes a native plant. My position has always been that if you are going to plant a garden with native plants they may as well be native to your own region. The result for us would be our “100-mile (160-kilometre) garden”.

Our intent was to showcase as many varieties as possible but in a manner representative of our native landscape. Some plants were to be grouped or massed such as white trillium (*Trillium grandiflorum*), low sweet blueberry (*Vaccinium angustifolium*) and twinflower (*Linnaea borealis*); this is how they occur in the wild. Others would be placed as specimen plants here and there: false Solomon's seal (*Smilacina racemosa*), blue cohosh (*Caulophyllum thalictroides*) and wood lily (*Lilium philadelphicum*). Appropriate small trees and shrubs – such as fragrant sumac (*Rhus*

aromatica), mountain maple (*Acer spicatum*) and pagoda dogwood (*Cornus alternifolia*) – would be situated to provide the dappled shade desired by some of the woodlanders.

Finally spring arrived and plants were set out and pampered for the first few weeks. Like many gardeners, our goal was to have a self-sustaining

landscape, with only minor adjustments of thinning, pruning or planting from time to time. However, weeds happen. In our case they were mainly poplar and cedar tree seedlings from an adjacent woodlot. We quickly resolved to keep ahead of them by whatever organic means necessary. Anything that wasn't bare rock, pathway or dense ground cover had to be kept well-mulched with a combination of pine needles and shredded bark.

The argument could have been made for leaving the toppled trees and uprooted vegetation to nature's succession and an eventual new forest. However, the potential fire hazard – within a dozen metres of our house – ruled out this option.

One of the realities of a forest dominated by white cedar (*Thuja occidentalis*) is the limitations it imposes on colonization of other plant species. With the exception of half a dozen large-tooth aspen (*Populus grandidentata*) and a few scattered marginal wood ferns (*Dryopteris marginalis*), the cedar had prevailed for many decades. With a few physical alterations of the site (using chainsaw, backhoe and hose) we were able to provide habitat for well over 100 native species. Some plants have



PHOTOGRAPH BY GRANT DOBSON

thrived, others are taking their time to establish a foothold. To our delight, maidenhair spleenwort (*Asplenium trichomanes*) and our regionally rare encrusted saxifrage (*Saxifraga aizoon*) are quickly colonizing new areas of the north-east face. This saxifrage is very easily propagated by either seed or division. At the nursery, if we need a quantity of plants quickly we dip the cuttings into #1 rooting hormone and they root up in about three weeks.

Asplenium rhizophyllum or walking fern (a bit of a misnomer because it takes one step per year) is slower in expanding its reach. Like other ferns it produces prodigious spores but my experience has been that in native habitats most new plants start asexually. We have discovered that a terrarium in the greenhouse works perfectly. New plantlets can then be tucked into pockets in the deep moss of the larger sedimentary rocks. A two-litre pop bottle (with a small pinhole in the bottom), placed in a strategic position, serves as a handy self-waterer for the first couple of weeks.

Finding an appropriate design and use for this changed landscape has increased biodiversity by a factor of 20. But perhaps the most positive thing to come out of the experience



PHOTOGRAPH BY GRANT DOBSON

Harebell (Campanula rotundifolia)

has been our enhanced connection to this little piece of the planet and the knowledge that the plants that evolved and have been growing here over centuries are still here. (And that – as far as we can reckon – never included the seemingly omnipresent *Echinacea purpurea* or purple coneflower.) That makes us feel that where we have chosen to live is truly home.

Grant Dobson and his wife Dorothy have more than 70 years of gardening experience between them and are now semi-retired from their greenhouse and garden centre business. One of Grant's new passions is the development of a botanic garden of Ottawa Valley indigenous plants. Visit connaughtnursery.com to see what's growing.

Wildflowers of California

by Laird R. Blackwell

There's something about wildflowers that touches us in a place too deep for words. A single flower, especially one at home in the wild, can take us back to the fresh eyes of a child; a whole landscape bursting with bloom can move us to laughter and tears of gratitude. It's almost impossible not to smile in the presence of a flower, not to feel more vital, more real. There's something about wildflowers that calls us to be more human, to live more honestly, to focus on what really

matters, to laugh more, to care more.

Every state has its wildflower treasures. California is especially blessed – such diversity of habitats and such abundance of species and stunning floral displays. From seaside to desert, from Central Valley grasslands to snow-cloaked peaks, from rolling foothills to redwood forests, from granite Yosemite to volcanic Lassen and Shasta, from the “urban” Santa Monica Mountains to the wild and remote Klamath and Siskiyou Mountains, from below sea level in Death Valley to the alpine

summit of Mount Whitney – what a wonderland for us and for the flowers, each place a sacred heritage, a joy and a responsibility. As our population and land use grow, we run the risk of destroying the very treasures that keep us “grounded” and give us meaning beyond our own ideas and productions. Already so many wild places and wild gardens have been lost to all but memory. Inexorably we push, we spread, we build. It's all part of our struggle to be human, to find a place, to leave a mark; but we also

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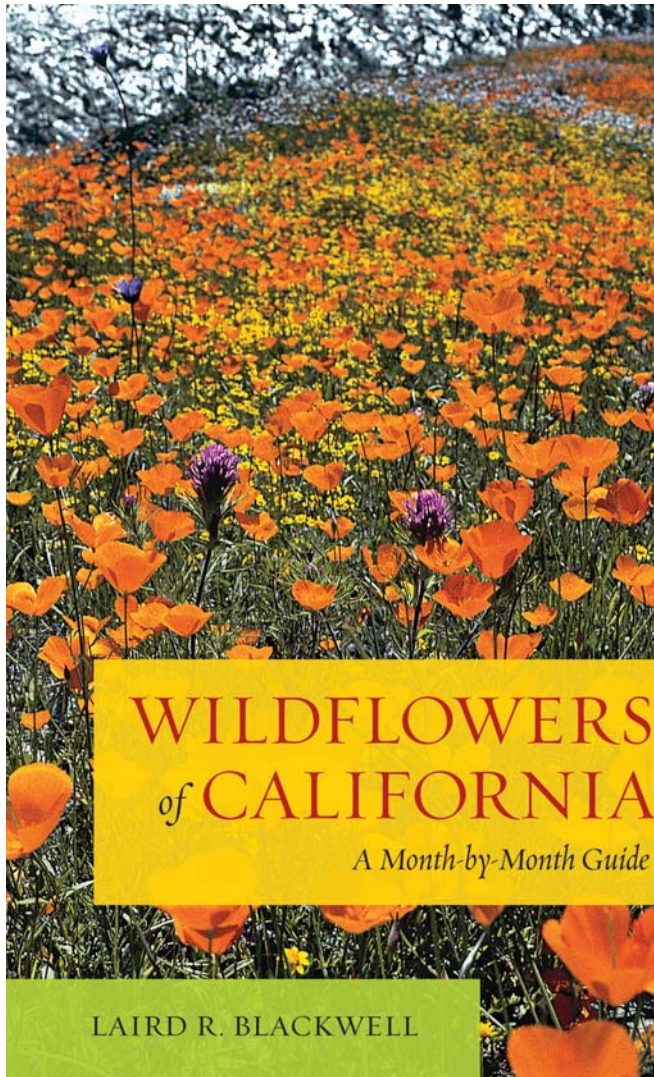
know that what we are losing is a vital part of our journey too, a part of our humanness, a part of our place.

There are many people working each day to preserve our wild heritage and our future; it is soul work, a gift to all of us whether we recognize it yet or not. Thank goodness for those who dedicate their lives to such work – it is vital to our survival and our being. Perhaps if we all took the time to focus on what really matters in our lives, we'd love more, we'd sing more, and we'd follow the call of the flowers more. This book is intended as an encouragement to follow that call and as a friend and guide along the way.

Let's imagine that it's now late January or part way into February in California.

Depending on where you are in the state, there may have been a few scattered flowers in bloom over the winter (in some years more than a few), but the fabulous, massive blooming California is known for has been on hiatus for several months now. These last few weeks you have been hungering for the return of the flowers – for their vibrant colors and sweet aromas and for the enthusiastic buzzing and whirring life that they bring in their wake. In our modern world of such rapid change and such uncertainty in so many aspects of our life, it's comforting to have some constancy, something solid that you

can depend on and look forward to. Though the wildflowers certainly offer change and uncertainty (you never



really know what kind of blooming year lies ahead or what wildflower surprises you'll find just around the corner), they also bring predictability and reassurance. Every year – year after year after year – the flowers return to brighten and lighten our lives. And not only do they return, but they return in

particular places and particular times (with some variability, of course, depending on precipitation and temperature among other factors). There will be some sparse blooming years and some prolific ones, but how wonderful to know that every year, like clockwork, in late January or February a few “old faithfuls” will explode into bloom again in a few special, low elevation places on the coast, in the coast ranges, in the Central Valley, and in the deserts to start the inexorable “journey” of the flowers across the months and across the state. From the first footsteps of spring (*Sanicula arctopoides*) along the coast in January or February to the last golden rabbit brush (*Ericameria nauseosa* or *Chrysothamnus nauseosus*) hoorah in the mountains in September or October, each month has its special flowers and its dazzling flower hot spots to feed your hunger and titillate your taste. Get out and enjoy it – it's a floral feast not to be missed!

Laird Blackwell is retiring this spring from Sierra Nevada College in the Lake Tahoe Basin, where he has taught literature, psychology, mythology, and summer wildflower field classes for 31 years. This “article” is excerpted from his new book *Wildflowers of California: A Month-by-Month Guide* published by University of California Press. He is leading a wildflower adventure in Tahoe from July 30-August 3rd. Info: lblackwell@sierranevada.edu.

**GIVING NATIVE PLANTS
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The image is a rectangular box containing the logo for the Long Point Basin Land Trust. The logo features a stylized plant with a large leaf and a seed pod, positioned above the text 'LONG POINT BASIN' in a serif font, which is enclosed in a dark oval. Below this, the words 'LAND TRUST' are written in a larger, bold, serif font. Underneath the logo, the text 'GIVING NATIVE PLANTS A PLACE TO GROW' is written in a bold, sans-serif font. At the bottom of the box, the website address 'www.lpblt.on.ca' is displayed in a sans-serif font.

Urban Paradise on Riverside Drive

by Stephen Johnson

It's a paradoxical paradise smack dab in the middle of a metropolis. The James River Park System spans a large swath of the James River at Richmond, Virginia, just northwest of where the river is navigable for merchant shipping. Though you are surrounded by city, at many entrances to the park you might swear for a moment that you have arrived in a primeval wilderness. I grew up near one entrance known as Pony Pasture and while that park site offers a nice view of the river, it is perhaps just a foot or two higher than the river at non-flood stage. Hence it floods even in minimal flood events and is thus limited in wildflower diversity.

For a combination of a wider river view and greater floristic diversity a short drive toward downtown Richmond, with a turn at 42nd Street, brings you to a small parking area under dense shade of towering tulip trees (*Liriodendron tulipifera*), red maple (*Acer rubrum*), northern red oak (*Quercus rubra*), sweetgum (*Liquidambar styraciflua*) and some American elm (*Ulmus americana*), bitternut hickory (*Carya cordiformis*) and hop hornbeam (*Ostrya virginiana*). It isn't easy to get close to the understorey here – it's both steep and rather slippery. However, I made the descent in 1987 and saw some leaves of spring beauty (*Claytonia virginica*) and, easily spotted from a distance, mayapple (*Podophyllum peltatum*). And while not many herbs grow under this moist shade and dense cover of leaf litter, it turns out to be prime habitat for the cryptic, recalcitrant and diminutive red-backed salamander. Unfortunately, by 2001 an unwanted herb, garlic mustard (*Alliaria petiolata*), had made its way onto the shady slopes. Since that time I have heard some field scientists suggest that garlic mustard may be harmful to red-backed salamanders by changing soil chemistry and thus driving away their

invertebrate prey.

To plunge deeper into the forest, you climb down a well-made stone stairway. In early autumn 1986, I saw a complaisant northern copperhead snake stretched full length and basking on the railing, allowing me to pass without making so much as a twitch. You next arrive at a metal bridge that juts riverward and terminates with an observation deck that provides a fair river view. There is also a descending spiral stairway which takes you to the humid and sweetly earthy-smelling ground of alluvial forest. You immediately encounter a walking trail sometimes alive with joggers, dog walkers and bicyclers. But then you turn north toward the river, leave the people behind, and scramble over low-rise boulders, across sand and through mud beneath red maple, sweetgum, black gum (*Nyssa sylvatica var. sylvatica*), willow oak (*Quercus phellos*) and green ash (*Fraxinus pennsylvanicus*) trees. You soon find yourself among larger boulders, swaths of exposed moist sand and an open creek-sized backwater of the river. In exposed areas by this backwater, I found an unusually dark blue Virginia spiderwort (*Tradescantia virginiana*) and not far away a clump of the purple-pink-flowered mistflower (*Eupatorium coelestinum*). From here you must jump from one large rounded boulder up to an even higher boulder to find yourself on an island nearly covered in pawpaw (*Asimina triloba*).

On the pawpaw island, few herbs occur where pawpaw stem density is high but in a clear swath in the island



The orchid-like flower of rock-conquering *Justicia americana*

PHOTOGRAPH BY STEPHEN JOHNSON

centre, I discovered a large colony of another aggressive plant, giant sunflower (*Helianthus giganteus*) with flowers at eye-level and higher. Down on the island shoreline grow dense stands of bladdernut (*Staphylea trifolia*), a few muscular-barked American hornbeam (*Carpinus caroliniana*) and a willow oak or two mixed in with shrubs of Virginia sweetspire (*Itea virginica*) all forming a dense thicket leaning out riverside. If you push too hard against it, the thicket may part and allow you to crash into the river. Instead, find one of the ubiquitous boulders abutting the bank and exposed as a turtle's back, then step onto the river's edge. From this vantage point you can see the tree-clad opposite bank. This view would have you believing you were far from civilization. There is nothing to indicate a large city to the north, the dissonant noise of traffic drowned by the rush and gurgle of the river.

Before you are boulders large and small, islands of life where young red

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maples, willow oak and water willow (*Justicia americana*) compete to colonize alluvial soils thrust between the boulders by the pure energy of river flow. Great blue herons hunt everywhere, looking very much like velociraptor dinosaurs as they stalk smallmouth bass, sunfish and frogs. Ospreys and double-crested cormorants dive and splash into the water in search of larger fish. The only sign of the bustling city on the north shore is the silent sentinel of the Carillon, a bell tower built as a memorial to Virginia soldiers who fought and died in World War I.

West of pawpaw island are open channels and more large boulders; some are 15 feet (five metres) or more above the river. Here is a return to river bluff woody species such as red maple, hop hornbeam and spicebush (*Lindera benzoin*). On the very top of these boulders, where they are solid and provide no purchase for plants, there are strange holes carved into the rocks, some over a foot (one-third of a metre) deep. The holes are carved by smaller rocks set spinning by the river current; the spinning rocks drill these holes as they themselves crumble into dust. In the spring of 1987 I rescued a juvenile bluegill sunfish and two infant largemouth bass from these holes. During that springtime flood, water carrying such juvenile fish had quickly risen 15 feet to these holes and retreated almost as quickly, leaving the fish stranded.

South of the island are short-statured boulders, stagnant water in occluded backwater, marsh and swamp forest and open sandy beach. Here in the open sun of the swamps is the titan of the freshwater marsh, swamp rose mallow (*Hibiscus moscheutos* ssp. *moscheutos*) which grows all the way to tidewater marshes on the James. With dinner-plate-sized, white to pinkish, rose-centered flowers, swamp rose mallow is the showiest freshwater marsh plant and the easiest to identify from an automobile. Not far away I noted a



Hibiscus moscheutos: towering sentinel of the sunny freshwater marsh

swamp chestnut oak (*Quercus michauxii*) named for the intrepid, colonial-era, French botanist Andre Michaux. This area of the James may be near the western limit for that tree. Another interesting naturalized tree that fits seamlessly into the riverside forest is royal paulownia (*Paulownia tomentosa*). You really notice it when it puts on its mid-spring show – cascades of pinkish-purple flowers that prompted me to name it the foxglove tree.

South of the island among knee- and thigh-high boulders I notice the beautiful but easily overlooked flowers belonging to water willow. This plant is aggressive, forming pure stands among these low boulders, but while

the narrow leaves and nearly square stems of *Justicia americana* are fairly plain, the flowers seem misplaced, as if they really belonged to an exquisite tropical orchid. Water willow grows in the James far to the west and into the Appalachian Mountains. Once while admiring the flowers, I came upon a half carapace of a blue crab lying on an exposed boulder. My brother Robert assured me that sometimes, especially during summer droughts, the famous Chesapeake Bay blue crabs follow the retreating brackish water upriver apparently as far west as Richmond. I suspect a great blue heron nabbed this poor fellow and ate him on the rocks.

In the deeper water behind the water willow, boulders are

breeding pools for southern leopard frogs and bullfrogs. While searching for frogs one time, I came upon an unexpected floral wonder, a floating specimen of water stargrass (*Heteranthera dubia*). Its canary yellow flower shone brightly above the leaf-choked, tea-coloured water. I later found just a few more water stargrass plants growing in saturated sand but these were shorter and less showy. Alas these plants were washed from the back channels and sandy shorelines by Hurricane Isabel in 2003. Water willow – in its secure boulders – survived.

The proximity of these plant communities to an oft-time raging river makes for frequent and dynamic

PHOTOGRAPH BY STEPHEN JOHNSON

change. The spring floods that deposit young fish onto boulder tops may also escort propagules of plants such as

water stargrass and water willow to safe harbours, but summer and fall hurricanes may just as easily rip these

plants away and send them farther downstream to start the colonization process anew.



PHOTOGRAPH BY STEPHEN JOHNSON

Just one view of an actively flowing James River backchannel with characteristic arching trees

Stephen Johnson grew up within a stone's throw of the James River at present-day Pony Pasture entrance. He gained a Masters degree in plant ecology at Virginia Commonwealth University, north of the James River, and has been a member of Friends of James River Park since 2009.

Thank you, NANPS Volunteers!

Over five days in March, NANPS sold tons of seeds, educated countless attendees and gained a few new members at Canada Blooms in Toronto. Twenty-four of our wonderful members came out to work a shift at the booth. Many thanks to all of you!

Eileen Atkinson, NANPS Director

Continued from page 1 – Squirrel Corn

appropriately – named Dutchman's breeches.

Both plants – and their cousin *D. eximia* (wild bleeding heart) – have delicate racemes of dangling, white or pink, heart-shaped flowers. Squirrel corn is distinguishable by its size: it has short, rounded spurs at the top of the flower, shorter than the flower stalk. The flowers of the Maitland cemetery discovery were about 2.5 centimetres (one inch) wide, white with yellow tips, worthy of any fine watercolourist.

The miniature plant has fern-like, blue-green leaves that are at once alternating, long-stalked, slightly triangular and finely divided. The lacy, delicate stems grow from a cluster of grain-like tubers. The bulblets (no doubt the “corn” of squirrel corn) are orange-coloured and “about the size of the tip of a baby finger,” says

contemporary wildflower enthusiast Helen Riggan who has volunteered her horticultural knowledge at the Wye Marsh in Midland, Ontario for over 20 years. Squirrel corn, which is usually found in forest areas of well-drained organic soils, is so rare in the Wye Marsh that it lives with other scarce specimens in a special wildflower garden.

Catherine Parr-Trail, one of Canada's earliest amateur botanists, chose the ephemeral (here today, gone tomorrow) *Dicentra canadensis* for inclusion in her 1868 book *Canadian Wildflowers*. Parr-Trail had this to say about the scent of the woodland plant: it possesses a “rich” fragrance that earned it “the not very inappropriate name of wild hyacinth.” In *Wild Flowers Worth Knowing* published in 1917, Neltje Blanchan, a poet and nature writer, described the delicious

perfume as fainter and subtler, but not unlike hyacinths.

The bulbs of squirrel corn are slightly alkaloid; apparently, consuming them has been known to kill livestock (we're not sure about squirrels). I'm no Mother Nature but my caution about *Dicentra canadensis* is this: Don't put the kettle on to boil for tea until the health study work has been done. In the meantime, enjoy the delicate fragrance and delightful flowers of the fleeting *Dicentra canadensis*.

Catherine Macleod is a writer based in Goderich, Ontario with grass hybridizer and horticulturist Martin Quinn. They co-authored *Grass Scapes: Gardening with Hardy Ornamental Grasses*, published by Whitecap Books in Canada and Ball publishing in the U.S. E-mail cmacleod@hurontel.on.ca.

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