

The Blazing Star



NEWSLETTER OF THE NORTH AMERICAN NATIVE PLANT SOCIETY

Native Plant to Know

Bush Honeysuckle

Diervilla lonicera

by Bill Moses

Around 1700, a Frenchman named *Dièreville* (first name unknown) visited Acadie (now Nova Scotia). He returned to France with plants he had collected, including one later named in his honour, *Diervilla lonicera* (bush honeysuckle). It was his only claim to fame.

The *Diervilla* genus is comprised of only three species, all in the New World. Two are native to the southern United States. The third, *D. lonicera* (also known as northern bush honeysuckle), has a large range extending from Alabama/Georgia to the whole of eastern Canada and west to Saskatchewan. It is reported to be hardy to zone 2b.

Diervilla is not a true honeysuckle like members of the *Lonicera* genus, but both genera belong to the scientific family Caprifoliaceae. They are similar in appearance; the major distinction is that bush honeysuckles have leaves with teeth.

D. lonicera is a low, arching shrub attaining two-thirds of a metre or two feet in height. It grows in sun and partial shade and a variety of soils. It has opposite leaves with small yellow flowers growing from the axils. Since the plant continues to grow all season long, it produces blooms for a long time. The flowers are attractive to bumblebees and hummingbirds. The

fruit is a small capsule of dry seeds which are dropped onto the ground over the winter.

I most often see bush honeysuckle growing next to walking trails in wooded areas in semi-shade, but I have also seen it growing among rock piles along the edges of fields in full sun. A few years ago, I thought I would try it in a rock garden under our front bay window. That was a mistake. It spreads underground and pops up all over the place. The leaves turn a nice orange and red colour in the fall but after they drop you are left with somewhat straggly, unappealing, bare

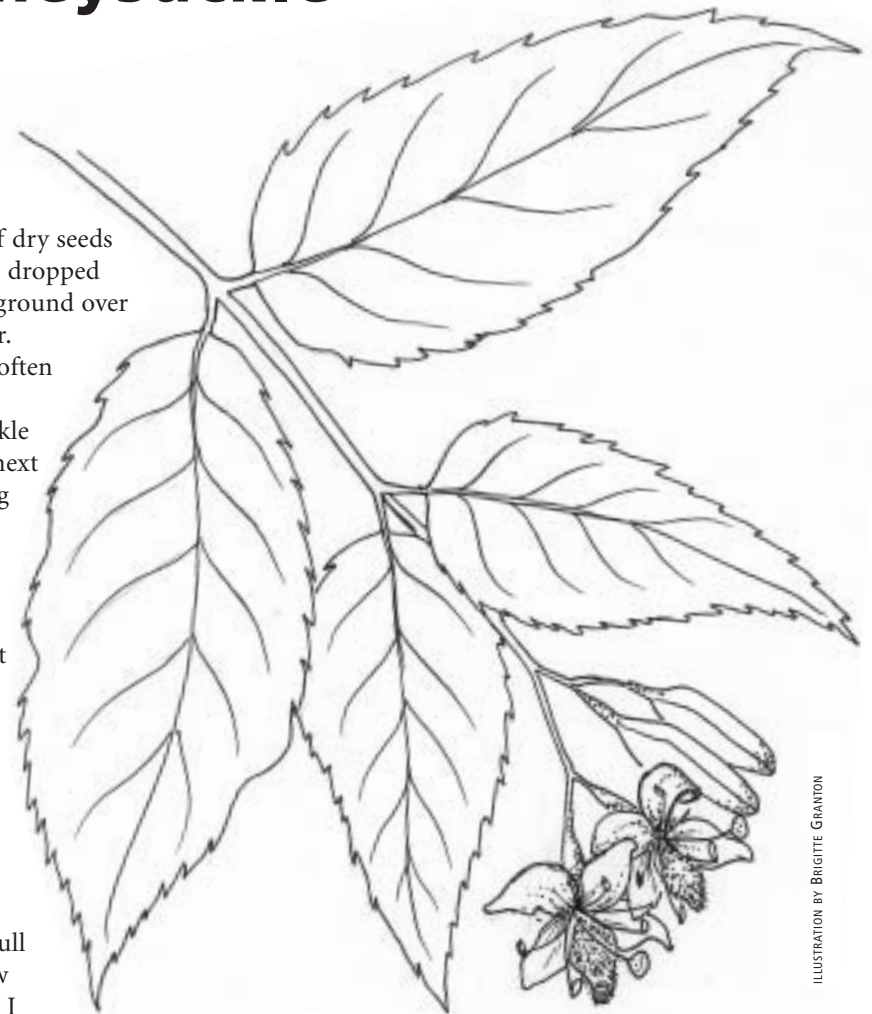


ILLUSTRATION BY BRIGITTE GRANTON

stems. However, these stems can be cut back to about 15 centimetres or six inches in the fall without hurting the plant's future prospects. Last fall I planted some *Diervilla lonicera* in another partially shady area where we

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The *Blazing Star* is . . .

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Editorial

NANPS directors have an ongoing think tank on initiatives that can make our existence here on earth, now and in the future, more sustainable. Incorporating native plant protection into strategies that enhance landscapes for our children and grandchildren is incredibly important. Individuals all over North America should not have to fight so hard and so often to preserve natural gardens and greenspaces. We need to change the culture so that people understand that native plants and landscapes are essential. If we can achieve this, politicians and policy makers will take notice and put it in writing.

Last November, Janice Keil, Alice Kong and I attended a launch of the Green Infrastructure Coalition (greeninfrastructureontario.org) at Evergreen Brickworks in Toronto. This partnership includes LEAF – Local Enhancement and Appreciation of Forests, Ontario Parks Association, Landscape Ontario, Toronto and Region Conservation (TRCA), Green Roofs and Evergreen. They are looking at ways to develop a vision and strategy to incorporate green infrastructure and social change into people's lives – and into the provincial government's agenda. The speakers and people attending this launch get it. They talked about sustainable landscaping and how native plants are an important part of that. We are very excited about this initiative, and our TRCA stewardship contact Colleen Cirillo has been seconded to help develop the vision and strategy. She has been a wonderful NANPS supporter, advising us on keynote speakers, and she is also active on the Ontario Invasive Plant Council (ontarioinvasiveplants.ca).

In January, Miriam Henriques, Alice Kong, Jane McCulloch and I attended the Toronto Master Gardeners Technical Update on Sustainable Horticulture at the Toronto Botanical Gardens (mastergardeners.ca). Over 240 master gardeners were in attendance. I was pleased to see that many of them are environmentally conscientious and eager to access

information about native plants. These people, many of whom have backgrounds in traditional and community gardening and experience with local groups and children, do presentations, provide advice to gardeners at horticultural society meetings and answer questions at many gardening events throughout Ontario.

The University of Guelph is also working with the Royal Botanical Gardens on courses for Sustainable Urban Agriculture and Horticulture certification (urbanhort.ca). Education through the universities will help ensure sustainability.

It is through these partnerships and the sharing of ideas that effective policies and teachings are being developed. We can't stop here though. This is not a trend, but an ongoing dialogue, and we can all do our part. Share your native plants with your family and friends. Become aware of environmental projects undertaken by non-profit groups and conservation authorities in your area. Talk to your local politicians in a positive way about planting native habitats on public land. Volunteer to restore native landscapes and maintain them, place signage to create awareness and, of course, celebrate these awesome spaces! Funding is available through groups such as the TD Friends of the Environment Foundation (tdfef.com) in Canada. Research other funding sources through the Internet.

If you are aware of other native planting initiatives or restorations in your community, we'd love to hear from you for an article in *The Blazing Star* – please e-mail editor@nanps.org. Also, please send us photographs from your garden or nature walks to plantsale@nanps.org; single species for our website database and attractive combinations for the plant sale! Let's share our successes and enthusiasm!

Happy International Year of Forests!
Let's make this year environmentally meaningful!

Karen Boniface, NANPS Secretary

VOLUNTEERS ARE NEEDED

CANADA BLOOMS

Once again NANPS will have a booth at the **CANADA BLOOMS** – The Flower and Garden Festival at the Direct Energy Centre in Toronto from March 16 – 20, 2011. **Volunteers are needed** to staff the booth. Help spread the native plant message. Please contact volunteer@nanps.org.

NANPS Annual Plant Sale

Saturday, May 7, 2011, 10am to 3pm
Markham Civic Centre, 101 Town Centre Blvd.,
Markham, Ontario

Volunteers are needed for setup on Friday, May 6 and at the sale and for cleanup on Saturday, May 7. Email volunteer@nanps.org or phone 416-631-4438. Please volunteer - your help is vital!

WHEN NATIVE PLANTS ARE NOT THE ANSWER

Belinda Gallagher, Head of Horticulture for the Royal Botanical Gardens in Hamilton, Ontario gave a thought-provoking lecture at Toronto Botanical Garden in January. She suggested that native plants have been over-sold by the media and landscaping industry, that there are major problems with the simple assumption that “native = good”, and that natives are not the solution to every landscaping problem.

She asked many hard questions, such as “What is native?” Is a plant which grows in the Niagara Region native in Northern Ontario? Is a native species that has been commercially grown in Ecuador or the Netherlands really suited to local conditions? Do “nativars” – commercial cultivars derived from native species but “improved” by careful breeding – count as native? If a tree was native to Ontario before the last ice age should it be welcomed back now or considered an invasive alien? There are no easy answers.

Belinda stressed that natives are just like other plants – they have to be planted in a suitable location. Natives are often promoted as drought-tolerant, but woodland natives usually need damp shade. Many Ontario natives are not salt-tolerant, so not suitable for roadside planting.

Protecting the genetic purity of wildflowers is also an issue. If wood poppy (*Stylophorum diphyllum*) grows well in

a local wood, it is tempting to assume it would be good to plant it in your garden. However, the cultivated wood poppy may inter-breed with the local natives and dilute their genetic inheritance.

Can we persuade gardeners to buy a small plant which has been grown from ethically collected local native seeds and costs \$9, when they can buy a larger and healthier-looking plant of exactly the same species from a big-box store for \$5? In the long run, the local plant will probably do better, but in the short term it looks over-priced.

Even when one does careful research and designs a garden using appropriate native plants, it is often difficult to implement the design due to the lack of locally grown native plants and the difficulty in ensuring that plants are correctly labelled. Consumers need to be well-educated, but glossy magazine articles about native plants may not be accurate.

Belinda concluded her presentation by suggesting there are advantages in incorporating native species into gardens, but the natives have to be purchased from trusted local sources.

This is precisely NANPS view of matters. That's why we encourage GTA gardeners to visit Canada's largest plant sale for locally sourced, ethically propagated species. Or check out the Sources section at www.nanps.org.

John Oyston, NANPS Director

VOLUNTEER EXCURSIONS TO SHINING TREE WOODS

Shining Tree Woods in Norfolk County, Ontario is NANPS flagship conservation property. A haven for a rare, naturally regenerating population of cucumber magnolia trees (*Magnolia acuminata*), the forest also hosts rare and vital native species.

Join a small band of NANPS volunteers in maintaining this unique forest. We will be mounting monthly excursions from March to June 2011 to monitor and continue our efforts to control garlic mustard and other alien invasive species that are beginning to impact the woodlot. Time and energy permitting, we'll also visit some fabulous local native plant nurseries. The dates will be arranged according to weather forecasts and volunteer availability.

Please contact land@nanps.org to register as a volunteer, indicating whether you prefer to drive or carpool and if you are able to bring a GPS unit to help map significant areas.

Drivers will be compensated according to distance and the number of volunteers transported to the site.

A great way to build up your volunteer hours with NANPS, help the environment and get healthy outdoor exercise.



Tony Jovan and Maggie Szpakowska haul bags of invasive alien plants out of Shining Tree Woods.

PHOTOGRAPH BY DEBORAH DALE

NATIVE RETURN: Teeming with Life

by Christina Lee Kobland

Nature lover that I am, it is surprising it took me so long to discover the intrinsic value of native landscapes. When building my new home on a clearing up-slope to four wooded acres (1.6 hectares), I was careful to include a room for my exotic houseplants, never dreaming I would lose interest in them. Seven years down the line the clay pots and bins full of potting media sit idle, and most of the orchids and other exotics are gone, discarded or given away. It is not that I no longer like them; they just do not belong here.

I had long heard about the advantages of native plants, but I never had the chance to do an entirely native habitat. That changed when I moved to this area that reminds me of the Pocono Mountains, only right outside Philadelphia - rolling hills and valleys, mostly wooded, with streams winding toward the Schuylkill River. Now that I have a native garden, I am pretty fanatical about it. I could never have guessed how quickly the bare compacted ground in front of my new home would transform into an oasis full of wildlife (I had) never seen before.

Knowing that I grew up with a father who sprayed his prize-winning roses before going to the office and called the lawn service at the first sighting of errant clover, you might be surprised by the “unkempt” appearance of my yard. Many people do not understand it. I cannot help but chuckle when I think of the departed suitor who, after seeing my property, exclaimed to a mutual acquaintance, “We obviously are very different people. Why, her front yard is full of weeds, and I can’t imagine why the township hasn’t cited her!”

It is true that I see the world differently. Knowing how my neighbours’ lawn mowers and leaf blowers disrupt my peace, I have to admit I am even a bit offended when people ask how my neighbours feel about my “natural landscape”. More

importantly, I question how others in good conscience can persist with their non-native lawns and exotic ornamentals, especially those who have already been taught the importance of planting native plants for wildlife.

My property is teeming with life. The front is a native grassland/wildflower meadow and shrubland which is the most in-decline habitat in Pennsylvania. Nesting and food-producing shrubs include *Viburnum nudum* (possum-haw), *V. dentatum* (southern arrow-

have seeded in, and I am letting a few grow because I like to see the change. There is nothing static about my garden.

I have sweeping beds of goldenrods (*Solidago* spp.), *Monarda fistulosa* (wild bergamot), *Monarda didyma* (beebalm), *Rudbeckia fulgida* (black-eyed Susans), *Pycnanthemum incanum* (hoary mountain mint) and *Physostegia virginiana* (obedient plant), all robust insect/butterfly magnets. I added in many favourite or less hardy species, like repeated plantings of *Lobelia cardinalis*



PHOTOGRAPH BY FAY KOBAND

The shrub to the right of the steps is scarlet elderberry (Sambucus pubens) with coralberry (Symphoricarpos orbiculatus) to the left. The small upright tree in the centre is nannyberry (Viburnum lentago).

wood), *V. trilobum* (highbush cranberry), *Cornus sericea* (red osier dogwood), *Ilex verticillata* (winterberry holly) and smallish trees including *Prunus americana* (wild plum), *Amelanchier arborea* (serviceberry) and *Cercis canadensis* (redbud). Eastern red cedars (*Juniperus virginiana*) add privacy and also host the juniper hairstreak butterfly, which appeared the first season after I planted them. Taller early successional trees like *Platanus occidentalis* (sycamore), *Prunus serotina* (wild black cherry) and *Populus deltoides* (eastern cottonwood)

(cardinal flower) which never survived. Now I simply allow what does well to persist and relinquish the desire to grow plants that do not.

My meadow grasses include *Andropogon gerardii* (big bluestem), *Andropogon virginicus* (broom sedge), *Sorghastrum nutans* (Indian grass) and *Panicum virgatum* (switch grass), which I would not use again as it is too aggressive. All of the grasses have beautifully coloured stems which provide important shelter for overwintering insects. Interspersed throughout are wildflowers: *Monarda* spp., *Penstemon digitalis* (tall white

beardtongue), native sunflowers (*Helianthus* spp.), *Asclepias tuberosa* (butterfly milkweed), blue-eyed grass (*Sisyrinchium angustifolium*) and plenty of other goldenrods and asters. All of their seedheads provide food for local and migratory fauna. Eastern bluebirds and tree swallows breed every year in boxes scattered about.

The meadow area was originally planted in a typical shallow-rooted turf grass. It is interesting to reflect on how it used to become like a lake during heavy rains. Now the native grasses, with their roots extending 20 feet (six metres) deep, soak up the stormwater runoff that flows from the lawned homes uphill from my property. I think of the hundreds of millions of dollars municipalities could save in stormwater control costs alone if they taxed lawns and offered credits for native meadows.

Each season brings new surprises. This year, brown thrashers, with their bright yellow eyes, nested in my shrubland. The parents and juveniles hung around until migration, like fixtures on my property. I cannot wait to see if they return next spring. What a treat to see a pair of scarlet tanagers eating the berries in my serviceberry, not to mention cedar waxwings feeding one another.

Ruby-throated hummingbirds return like clockwork the third week of April and stay until October. They love the *Lonicera sempervirens* (trumpet honeysuckle) and beebalm. Many other birds such as orioles, catbirds by the dozen, towhees, rose-breasted grosbeaks, raptors and warblers love the habitat.

Reptiles include breeding eastern box turtles and eastern milk snakes, species of conservation concern. There are green frogs, pickerel frogs, and American toads. Once I looked out my front door to see a huge snapping turtle lazing on my front porch.

Groundhogs and their darling babies scurry around the property. I never know where the little guys will pop up next. I get such a kick out of all these creatures.



PHOTOGRAPH BY CHRISTINA KOBLAND

Walkway to Christina's front door through perennial shrubland

My woods have their own set of interesting goings-on. Wild turkeys hang out below my corn feeder every day. Red foxes have kits in dens beneath the boulders. Flying squirrels glide to and from my feeders at night. Many of the white and red oak (*Quercus alba* and *Q. rubra*), American beech (*Fagus grandifolia*), and pignut hickory (*Carya glabra*) trees produce mast crops critical to the survival of the animals living in the woods like chipmunks, squirrels and deer. One of my favourite trees, prevalent on the woodland edges, is sassafras (*Sassafras albidum*). I love the clonal colonies of crooked trunks, leaves shaped like mittens, and gorgeous fall colour.

Many plants have been destroyed by the large deer population, but I would never advocate hunting them, as I love the deer too. I fence in smaller plants individually with five-foot (two-metre) fences. Once the plant grows beyond the browse line, it will survive. I also added a "patch garden", a fenced 23 x 25 foot (seven by eight metres) woodland plot below my house in which I planted herbaceous material susceptible to deer browse. Each spring the patch garden is resplendent with colour from *Geranium maculatum* (wild geranium), *Mertensia virginica* (Virginia bluebells), and *Aquilegia canadensis* (eastern columbine), to name a few. I am hopeful the plentiful seeds and runners will spread into surrounding

areas kept free of invasive growth...and through sheer numbers survive the deer's browsing.

In the woodland, there are lots of deer-resistant, fast-growing *Liriodendron tulipifera* (tulip trees), host to the tiger swallowtail butterfly. I see as many of the swallowtails fluttering high in the canopy as I do on the Joe-pye-weed (*Eupatorium dubium*) which has seeded in throughout my property. Spicebush swallowtail caterpillars feed on the understory spicebush (*Lindera benzoin*). Flowering dogwood (*Cornus florida*) dot the woodland in spring with white blossoms, eventually maturing into red berries the flocks of robins can pick off in a single day. Also growing on the forest edges are paw paw (*Asimina triloba*), host plant for zebra swallowtail larvae. I am hoping to see one of the butterflies, which I saw just once as a young girl.

Having grown up in a built-out suburb, I was struck, on first moving here, by the sounds of the woodland day and night: the cacophony of the forest birds waking me every morning and nocturnal species such as great horned owls calling for their mates at night. When my brother came for a visit, he remarked upon the different flight patterns of the birds: "They don't fly as they do through an open suburb, but rather in a series of exaggerated swoops." I often wonder

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what it must have been like before the Europeans came. Passenger pigeons, now extinct, were one of the keystone species of the eastern deciduous forests, flying through in unbelievably vast flocks.

One morning I walked out my garage to find a baby raccoon rolled up in a tiny ball inside a clay flower pot, asleep. My heart melted. Months later I would see him climb the tallest sassafras and sleep through the day in a crook at the top.

Dead trees provide critical perching and nest sites and shelter for birds and mammals alike. It can take 30 years to develop a cavity suitable for species like bats and owls. I always recommend leaving dead trees standing if they are not a hazard, and I enjoy their artistic silhouettes.

The wetland and stream crossing at the foot of my hill is host to other species like black walnut (*Juglans nigra*) and box elder (*Acer negundo*), a native species many view as a trash tree, yet very beneficial to wildlife. The female box elders are especially beautiful with their fanciful springtime catkins. Tiny shrews forage in leaf litter alongside the stream, completely without fear of my presence, perhaps because their bite can be venomous. This area is my next challenge as I continue to manage for invasive growth in the understorey.

My biggest mistake was cutting my grapevine at the advice of an arborist. Most grapevines in the area are native and an important food source for birds. I suffer when I see the cut vines, and realize how important it is not to



PHOTOGRAPH BY CHRISTINA KOBLAND

An all-native pond fashioned for wildlife, including a beach allowing easy entry/exit, and a waterfall with shallow pools for their bathing and drinking. Green frogs, American toads, snapping turtles and garter snakes all breed here. Christina does not include any fish as she wants to keep it strictly for native wildlife. Great blue herons frequently stop by for a frog.

blindly trust what others say. Virginia creeper (*Parthenocissus quinquefolia*) is another important native vine and prolific berry producer. The same is true of poison ivy (*Toxicodendron radicans*). I always leave it, and just avoid it, as I realize how integral it is to the health of the forest. It also has gorgeous fall colour.


My experiences have inspired me to share my knowledge, and I founded my business, Native Return, LLC, to offer native landscaping services to others.

My clients include municipalities (such as the City of Philadelphia), electric utilities, engineering firms, school districts and homeowners who share my love of nature. I create wildlife corridors whenever and



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wherever possible. My projects have won regional and national awards, and I can parlay these to draw more attention to native habitats. The more mainstream they become, the easier it is to “sell” the concept to others.

Through lectures I educate the public about the importance of protecting and rebuilding our biodiversity, critical to the ecosystem services we, as humans, depend on. People say my enthusiasm is contagious. I hope so, as my goal is to make my way to larger venues and audiences.

My latest venture has been the formation of East33.org, whose mission is to protect native wildlife and native habitat. The organization was founded to preserve 33 acres (13 hectares) of important wildlife habitat commonly referred to as the “East 33”. Local municipalities wanted to introduce trails and commercial farming into the area, which is near my home. This would have fragmented the wildlife corridor, adversely affecting sensitive species. We were successful in convincing Philadelphia City Council to protect the land permanently by enacting a landmark conservation bill, and my township has indefinitely delayed



PHOTOGRAPH BY FAY KOBLAND

Christina Kobland and her pet Jackson on a morning stroll through her four-acre all-native wildlife habitat overflowing with Eupatorium rugosum (white snakeroot).

plans for the trails.

My commitment to the cause does not win me any popularity contests and, being so driven, I sometimes miss out, sitting in front of my computer instead of going out dancing with my friends. But the very survival of the planet hinges on our biodiversity – the interrelated life all around us. That is why I am busy spreading the word. And in the morning, when I walk onto my deck and see a great blue heron stalking frogs in my pond, or a big

buck and a fox at a standoff in the distance, I know exactly why I persevere...and I smile.

Now if only there was a good man out there who didn't think my yard looked messy.

Christina Kobland's native plant gardens won a 2010 NANPS Garden Award for Rural Reclamation. Her work can be viewed at www.NativeReturn.com and www.East33.org.

Calendar of Events

February 24-25, 2011

16TH WATER CONSERVATION/XERISCAPE CONFERENCE
Albuquerque, New Mexico
Contact scott@xeriscapenm.com

February 26, 2011

THIRD ANNUAL POLLINATION SYMPOSIUM
Guelph, Ontario
Link to the event at:
www.pollinator.ca/guelph/index.php?n=Events+%26+Major+Meetings

February 26, 2011

CONSERVATION IN A WORKING LANDSCAPE
Platteville, Wisconsin

The Prairie Enthusiasts annual conference:
www.theprairieenthusiasts.org.

February 26, 2011

WILD ONES 2011 DESIGN WITH NATURE CONFERENCE
St. Paul, Minnesota
Visit
www.DesignWithNatureConference.org

February 28, 2011

ELM RECOVERY PROJECT
Toronto Botanical Garden
Toronto, Ontario
Visit www.torontobotanicalgarden.ca
or see enclosed brochure for details.

March 22, 2011

UNIQUE NATIVE PLANTS OF THE MALCOLM BLUFF SHORES, NIAGARA ESCARPMENT
Toronto Botanical Garden

April 5, 2011

NATIVE PLANTS IN OUR DAY TO DAY LIVES. CHANGING THE CULTURE
Toronto Botanical Garden

April 6, 2011

TRANSFORMATIONS: PARKING LOTS, PLANTS AND PARADISE
Toronto Botanical Garden

Bluff Ecosystems of Lake Huron

by Geoff Peach

When we think of the Great Lakes it often conjures up images of massive expanses of fresh water and wide sandy beaches. Probably last on the list of mental images are the bluff ecosystems that occur at locations along each of the lakes.

On Lake Huron, the bluffs, composed of clay till deposited by glaciers 15,000 years ago, are restricted to the southern portion of the lake (mainly along the shores of Huron and Lambton Counties). They average 20 metres (66 feet) in height, but at their highest in the Town of Goderich they measure 27 metres (89 feet) above the water. Coastal bluffs make up about one percent of Lake Huron's coastline, but influence a much greater

massive dune deposits. Those dunes have evolved and developed into diverse ecosystems.

During the last 200 years, the Lake Huron watershed's forest-dominated ecosystem was cleared for agriculture. The only vestige of forested land that remained was along the margins of the lake. Called the Huron Fringe, this forest corridor would remain intact until cottaging became popular in the early 20th century. Now the remaining coastal corridor is gradually being fragmented into isolated segments with unknown long-term ecological consequences.

The portions of these bluffs that are actively eroding provide valuable sand that maintains beaches. Much of the bluff shoreline along Lake Huron is what one might consider “marginally

urbanites that have never owned coastal property, but may have a romantic notion of the coast, perhaps recalling some postcard of a home atop a bedrock cliff with waves crashing along the shore.

Many people simply do not understand the coastal processes at work along the shores of Lake Huron. Clearing a bluff slope of vegetation in order to gain a better view of the lake (yes, this actually happens) not only affects the original property, but – as the bluff slope eventually fails – neighbouring properties as well. It's often a case of unintended consequences, but poor coastal knowledge can result in actions that have disastrous results. As the roots of the cut trees decay, their stabilizing influence diminishes over a three- to nine-year period. As a result of the gradual loss of root strength after tree removal, slopes may fail several years after clearing or thinning. By that time, the person responsible may have sold the property and moved on, leaving a mess for future landowners. Are there not laws to stop this kind of activity? Short answer: no. The only way to avoid this problem is through education and awareness.

Not commonly understood is the enormous value of coastal vegetation, from the incredible species biodiversity it represents to its roles in providing wildlife habitat, controlling erosion, filtering pollutants, taking up carbon dioxide and slowing surface drainage. Its value can only increase as we move into an era of climate change which is projected to modify precipitation and temperature in the Great Lakes region. Recent research by the Maitland Valley Conservation Authority has demonstrated that the intensity of precipitation has been increasing throughout the watershed, particularly in fall, winter and spring. The research noted “that small streams and ravines which drain directly into Lake Huron may be particularly vulnerable, due to their actively eroding gullies, less competent geology and clay-rich soils. These



The bluff and ravines around Black's Point, south of Goderich, are covered with mature trees providing an element of stability to the slopes. Note the wide beach and dune formations at the base of the bluff, providing protection from wave erosion.

geographic area comprised of several coastal reaches. Sand that erodes from bluff systems washes into the lake and forms the beaches that span the shoreline. In this part of Lake Huron, sand from eroded bluffs and ravines forms the beaches that span from Point Clark to Kettle Point. Some areas are more prone to erosion than others. Historical information shows that certain parts of this shoreline are continually eroding, other areas are eroding more slowly and still other areas have wide sandy beaches and have been stable for many decades. Over millennia, sand from eroded bluffs has been carried alongshore by waves and currents (termed littoral transport) and deposited in the Grand Bend-Pinery-Ipperwash area, forming

stable”. That means the bluffs have evolved through the erosion process to form mature vegetation communities, typically including white ash (*Fraxinus americana*), white birch (*Betula papyrifera*), basswood (*Tilia americana*), white cedar (*Thuja occidentalis*) and maple (*Acer* spp.). This vegetation binds the soils and helps to hold the slope together to achieve stability. However, that stability is tenuous. As the development of cottages and residences has progressed along this portion of Lake Huron, people have cleared some of this vegetation causing erosion to occur. You might wonder: “What were they thinking?” Typically, those who buy and build along the shoreline tend to be

areas also tend to be extensively drained, further accentuating any potential erosion issues by increasing total runoff.”

Recent slope failures following heavy precipitation events are a symptom of this changing climate regime. Native vegetation removal in coastal bluff areas reduces the resiliency of our shoreline to adapt to the onset of these changes. Increased investments are needed in planting initiatives that encourage more woody vegetation which will provide some buffering to the increases in storm runoff. Given this emerging reality, conservation outreach advice may need to change, recommending to landowners that they plant more southern, Carolinian-type species as warmer temperature regimes shift northward. Recommended trees might include bitternut hickory (*Carya cordiformis*), white oak (*Quercus alba*) and tulip tree (*Liriodendron tulipifera*), to name a few. Currently, resource management agencies do not offer these species in their planting programs.

A critical emerging threat to coastal biodiversity is the spread of alien invasive plants. Aquatic invasives, like zebra mussels, have received a lot of attention over the years, but invasive plants have not. Plants such as garlic mustard (*Alliaria petiolata*) and common reed (*Phragmites australis*) have begun spreading into coastal environments due to changes in the environment (cottage development, soil disturbance, water level changes). The resulting changes are alarming. For instance, garlic mustard has been spreading along the forest floor of parts of the Huron Fringe corridor. Since this invasive emits a toxin that can stunt the growth of the forest understorey, invasive species management is urgently needed for the long-term health of the Huron Fringe forest. Likewise, common reed has begun to invade beaches, altering the sand exchange regime, creating dense monocultures and threatening rare plant species that are coastal specialists such as great lakes wheatgrass

(*Agropyron psammophilus*) and long-leaved reedgrass (*Calamovilfa longifolia* var. *magna*). Both are globally rare, Great Lakes endemic dune plants, although the reedgrass is largely restricted to Lake Huron.

Bluff Stabilization Project

To underscore the importance of native bluff vegetation and the need to keep it intact, the Town of Goderich, along with the Maitland Valley Conservation Authority, undertook a bluff stabilization project in the 1990s that involved reinstating native species on a severely eroding lake bluff. It involved three residential properties and the use of a technique called soil bio-engineering that combined conventional slope stabilization techniques with more innovative ones, using plant material as a key component. While the project was very successful, it was also expensive (over \$150,000 at the time). Preventing human-caused erosion and de-stabilization is the preferred approach. It's less costly to the environment and to taxpayers.

The Lake Huron Centre for Coastal Conservation published a Coastal Plant Guide in 2010 that will help residents distinguish between harmful and beneficial shoreline plants. The guide uses photographs to assist in plant identification of both native and non-native species.

The Biodiversity Strategy for Lake

Selective cutting and pruning can provide an effective "window" to view the lake. Windows maintain the protective function of the trees as a buffer against storm winds, surface runoff and erosion.



PHOTOGRAPH BY GEOFF PEACH

Huron (2010), developed by a multi-agency, bi-national partnership, identifies key threats to coastal biodiversity. The following stressors were noted as critical threats: climate change, development and shoreline alteration, invasive species and water pollution. All pose a threat to the resiliency of coastal bluffs. Priority needs to be placed on stewardship outreach that will provide people with the tools and knowledge to better protect this special ecosystem. Coastal bluffs have received little attention over the years – the poor cousin to the sexy dune grassland ecosystems or coastal wetlands. Cottagers in coastal bluff areas are beginning to awaken to the need for conservation of this ecosystem, but currently lack the information and tools necessary to be active and successful stewards. The Lake Huron Centre for Coastal Conservation is developing resources to fill this gap. It will be working, with its community partners, to assemble a first-ever toolkit for landowners and municipalities for better stewardship of bluff environments.

Geoff Peach is Coastal Resources Manager for the Lake Huron Centre for Coastal Conservation. Geoff has worked in the field of coastal management for the past 25 years, initially working for the Saugeen, Maitland and St. Clair Region Conservation Authorities, and then co-founding the Coastal Centre in 1998. For more information on the programs and projects of the Coastal Centre, go to www.lakehuron.ca

The Elusive Gentians

by Perry Peskin

Looking for members of the gentian family in northern Ohio? It can be frustrating.

I remember the first gentian I ever found, as a result of a “hot tip” that the plants were blooming on the shale bank adjoining Chagrin River Road south of US 422 in eastern Cuyahoga County. On a clear October day, after locating the shale bank and doggedly climbing up the slope, slipping down two feet (two-thirds of a metre) for every three feet (one metre) ascended, I found on the few level places, growing under the first autumn leaf-fall, a delicate-stemmed plant with narrow, opposite leaves, one or two vase-shaped flowers at the top, and lightly fringed petals of a peculiar smoky blue. As anyone might be, I was justly proud of having discovered the celebrated wildflower *Gentianopsis crinita*, the fringed gentian.

Actually I hadn't. The diminutive gentian growing on shale banks was, as in most cases, *G. procera*, the small fringed gentian (or in Ohio a hybrid between the two species). To become acquainted with the real thing, I found out years later, one has to travel to mucky bottomlands, such as Stumpy Basin of Summit County, or to sterile borrow pits, waste areas depleted of topsoil by construction projects, such as the well-known location on Boston Mills Road, north of Peninsula, also in Summit County, which is next to, and created by, the Ohio Turnpike.

Here in all its glory grows the true fringed gentian, with stout stems ranging up to three feet (one metre) in height, broad leaves surmounted by dozens of flowers, and petals all deeply fringed at the ends and along the sides—a beautiful, but hardly delicate, wildflower, and an unlikely companion to the coarse, hardy mulleins, asters, and grasses that it competes with in a marginal type of habitat.

For the gentian family, competition is the name of the game. Like the

North American heaths and orchids, attractive but rare plants, the gentians seem to prosper in habitats shunned by most plants as too dry, rocky, sandy, or boggy. They seldom are found in large stands or among familiar climax vegetation, such as a beech-maple forest. In poor, treeless habitats, since they do not run the risk of being shaded out, most gentians bloom from midsummer to late fall, as do their relatives in the milkweed (*Asclepias* spp.) and dogbane (*Apocynum* spp.) families.

The giant of the family in Ohio, the American columbo (*Swertia caroliniensis*) blooms in June on sunny slopes, such as the toboggan-run in Virginia Kendall Park, north of Akron in Summit County. Its small, greenish-white, butterfly-like flowers do not resemble those of the other gentians. Even when not in bloom, it can be recognized by its great size and the rosette of huge, strap-like leaves growing from the base.

By contrast, the midget of the family, the yellow bartonia (*Bartonia virginica*) pokes its wiry leafless stems only a few inches above the moss in dark swamp forests, such as Towner's Woods near Kent or Grand River Terraces in Ashtabula County. In a striking case of plant mimicry, the tiny, yellow-green flowers of bartonia look for all the world like the inedible spore capsules of the haircap moss (*Polytrichum*) which it lives among, and thus perhaps escapes predation from, herbivores.

A large group of attractive, pink-flowered gentians (genus *Sabatia*) live in the Cuyahoga Valley's Deep Lock Quarry Park, growing quite comfortably in the quarry itself, where water seeps out of the rocks. Most of the *Sabatias* have a yellow, star-shaped pattern in the centre of the flower to attract pollinating insects.

In contrast, many of the blue gentians found in Ohio have flowers partly closed at the top, as if to



PHOTOGRAPH BY PERRY PESKIN

The rarer of the two closed gentians, the blind gentian (*Gentiana clausa*), has a more pointed apex with no white membrane showing at all.

discourage insects. Stiff gentian (*Gentiana quinquefolia*), found on dry hillsides such as the shale bank on River Road, has many small tube-like flowers clustered near the top. The petals point inward and partially block the flower tube. The bottle gentian (*G. andrewsii*) and the rare blind gentian (*G. clausa*), both found on slopes, roadsides, or stream banks, go further. They have “elastic” strips along the petals to make sure that even if the flower is forced open, it will snap shut again. One would expect that the chief pollinators would be tiny flies that can creep into the narrow opening at the top. A little observation soon dispels this notion. The major pollinating insects are large, clumsy bumblebees that force an entry past the elastic-lined opening and disappear inside the flower, which closes on top of them. After a few seconds, in which they somehow turn around, they emerge head first, pushing their way out of the “bottle” having gathered nectar and pollinated the plant at the same time. Undaunted by the effort, they usually aim for another closed gentian and repeat the

process.

Perhaps the rarest gentian in Ohio, a white-flowered aquatic called bogbean (or buckbean), now known from only five locations, resembles the fringed gentian most closely with its cup shape, abundant flowers, and deeply fringed petals. Now placed in a

separate family of its own,

Menyanthes trifoliata seems to be a northern

plant displaced by the last glacier and surviving only in cold bogs, a companion of pitcher plants (*Sarracenia purpurea*) and rose pogonia orchids (*Pogonia ophioglossoides*). Although it doesn't bloom in Canada until July, bogbean blooms in mid-May in Ohio, if at all, for late frosts often kill the flower buds.

Because of their habitat preferences, many of Ohio's gentians are listed as endangered, threatened, or potentially threatened by Ohio's Natural Heritage Program, which has been mapping and inventorying the 600 rarest of the native plants since 1978. Since the fringed gentian chooses a wide variety of marginal habitats, it is rated as potentially threatened; however, due to its great fame and attractiveness, it tempts too many people to pick it or transplant it from the wild. They might be disappointed when they find it is a biennial or annual. A better garden subject, the bottle gentian, which is a perennial and not on the endangered list, can be bought as cuttings from wildflower dealers, transplanted easily into ordinary garden soil, and expected to bloom



The large flower of the Plymouth gentian (Sabatia kennedyana) has 10 large petals with a complex yellow centre consisting of 10 lobes, each edged with red and subdivided into a group of three. This species has been found only in limited coastal regions of Nova Scotia, Massachusetts and Rhode Island.

every year, attracting the bumblebees to perform their eccentric acrobatics before winter closes in. Frustrated plant hunters can thus enjoy one of the elusive gentians close to home.

Perry Peskin is busy at work on Search for Lost Habitats, Book II. Since Book I (Wilmington, OH: Orange Frazer, 2006) mainly looked at Ohio where he lives, Peskin widens the geographic scope in Book II. The upcoming work is a first-person botanical journey from Newfoundland to Alaska. Highlights will be Newfoundland with Labrador, Hudson's Bay, American and Canadian Rockies, and the Pacific coast: Washington, British Columbia and Alaska. Peskin will also detour south to include his plant-laden travels in the White Mountains of New Hampshire and the northern Shenandoah Mountains. Perhaps the most unusual habitats

in Book II will be the serpentine barrens on both coasts-in Oregon and in Newfoundland. Finally Perry will take us back to his hometown of Cumberland, Maryland. There a serpentine barren dear to the author, which yields the rare Phlox buckleyi, awaits.

NANPS Online Bookstore

Thanks to the efforts of John Oyston, NANPS now has a bookstore on its website at www.nanps.org. Anyone interested in reading about, selecting or purchasing books on native plants and related topics, can browse a NANPS-recommended selection of books on our website, and purchase them securely from Amazon.ca. In appreciation to us for referring business to them, Amazon returns a small payment to NANPS.

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NANPS members are welcome to suggest other books that might be added to the list if they are on the Amazon website.

Happy reading!

PHOTOGRAPH BY PERRY PESKIN



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Continued from page 1

have had trouble getting plants established. In this case, we will be mowing the lawn right up to the edge of the bed so we should be able to contain the exuberant honeysuckle. A low-maintenance alternative for difficult situations, it can be used to stabilize a slope or for mass plantings.

The most widely distributed shrub associates of bush honeysuckle include beaked hazel (*Corylus cornuta*), alternate-leaf dogwood (*Cornus alternifolia*) and speckled alder (*Alnus rugosa*). Bracken fern (*Pteridium aquilinum*) is often associated with bush-honeysuckle.

Medicinally, bush honeysuckle was used mainly for urinary problems. It was also helpful for stomach pain (colic), as an eyewash for sore eyes, and for other ailments. Various parts of the plants were steeped in water (meaning soaked in very hot but not boiling water) in order to prepare the concoction.

In my view, this plant would be ideal on a large property or where it can be kept under control. It's a good pioneer species that can outcompete weedy grasses thus making it easier for trees and shrubs to become established. Because it is fairly aggressive, it might even be able to supplant invasive aliens such as goutweed (*Alliaria petiolata*) and periwinkle (*Vinca minor*). Some might say you would just be replacing one hard-to-control plant with another. However, we must not forget that bush honeysuckle is a native plant that has developed symbiotic relationships

with other native organisms for thousands of years. Thus, it contributes to a more efficient ecosystem.

Diervilla lonicera is available from the Inglis Falls Arboretum propagation facility in Owen Sound, Ontario. We have successfully grown it from seed, stem cuttings and divisions. I urge you to try using it too.

Bill Moses volunteers at the Inglis Falls Arboretum.

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