

Blazing Star

Newsletter of the North American Native Plant Society

Native Plant to Know

Bottlebrush Buckeye

Aesculus parviflora

by Catherine Siddall

Michael Dirr's tome on woody plants is unlikely bedside reading because of its unwieldy size and dry, point-form style. It is a manual, after all. But by skipping to the Landscape Value listing I am often rewarded with an entertaining insight based on Dirr's experience with these plants over a considerable period of time. (It can take years, even decades, to learn about how woody plants adapt and grow.) I pay particular attention to his evaluation of North American woody natives because I am convinced of their great untapped potential for use in the built landscape.

Aesculus parviflora,
bottlebrush buckeye, is featured
in glorious golden fall colour
on the cover of my paperback
copy of Dirr's Manual of Woody Landscape
Plants. The author's enthusiasm for this plant is
evident: "Excellent plant for massing, clumping
or placing in shrub borders...even if it didn't
flower it would be a superb shrub for foliage
effect". Under the Flowers heading he continues,
"In my mind, it is one of the handsomest of all
native southeastern flowering shrubs." After
reading this, I was hooked.

I was excited to discover two mature

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The Blazing Star is

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From the Editor...

This winter NANPS welcomed four new board members.

Eva D'Amico is a preschool teacher who tends her native plant garden and watches birds in her leisure time. A nature photographer as well, she searches for giant puffballs with her husband. Tom Du brings 10 years of Chinese forestry research experience to the organization. Since coming to North America he completed a Masters of Forestry program at Madison, Wisconsin. His thesis was drought resistance in American elms. Emily Zhang is a web designer who wants to grow beautiful native plants in her new backyard. Garden designer Gillian Leitch enjoyed her experience hosting our Canada Blooms booth so much that she joined the board! Thank you to all.

It's encouraging to see more members joining the NANPS board of directors. Of course directorship is not for everybody. But don't let that stop you from becoming involved. As a volunteer organization we rely on members to get the jobs done. Without a dedicated volunteer base NANPS' Seed Exchange, Plant Sale, booths at Canada Blooms and other events, newsletter, info sheets, plant rescues....would never happen.

Members new to the organization, especially those with limited native plant gardening experience, may be intimidated by the wealth of knowledge exhibited by longtime gardeners. Don't be. Everyone started out somewhere, and everyone can benefit

from others' experience. Besides, we have fun! Even the humdrum activities (like stuffing envelopes – always need people for that) become interesting when you get to chat with like-minded people with great gardening stories to tell. As for the Plant Sale or the booths, you may not be able to answer every question that a passerby throws at you, but there will probably be someone around who can - and you will learn from them.

Members living outside the Greater Toronto Area have fewer opportunities to volunteer but can still make a valuable contribution. For the newsletter to be a vibrant mouthpiece for native plant gardeners across the continent we need input from you. Never written an article? No problem; we'll coax you through it. Have great photos or illustrations to exhibit? We'd love to see them. Have a comment about the Blazing Star or other aspects of NANPS work? Please tell us (nanps@nanps.org or (416) 631-4438) – we want to know.

For those who love to communicate electronically, our website Message Board (www.nanps.org) is a great place to ask and answer questions, get a dialogue going, find native plant organizations or just learn more about plants.

We're determined to become a more member-friendly organization. But we need your involvement to do that. Come join us.

Irene Fedun

Volunteers Needed

NANPS biggest fundraising event - our annual Plant Sale – is taking place on May 10 from 10 - 4. We need help setting up the plants when they arrive on Friday evening, selling the plants on Saturday and helping with the take-down in the afternoon.

Of course you will want to take time out for your own purchases. Be prepared; check out some of the plants that will be available for sale by visiting www.nanps.org. As a member you can even order your plants ahead of time.

If you're growing native plants from seed and have way more seedlings than you can

use why not donate them to the Members Table at the sale? Or dig up some of those rapacious spreaders such as wild ginger (Asarum canadense) or mayapple (Podophyllum peltatum) and bring them along. (NANPS searched high and low but we simply could not find any ethically grown *Podophyllum* to offer for sale this year.)

Please join us for this busy and fun sale. Volunteers will be invited to a social event afterwards. Details to be announced.

Help us make the 2003 NANPS Plant Sale the best ever.

A SPECIAL THANKS TO JOE REA FOR JOINING NANPS AS A SUSTAINING MEMBER!

Know Your NANPS WEBSITE!

Website feature this issue: http://nanps.org/feature/frame.shtml. Learn more about outstanding natives from sassafras to sedges.

Remember that you can post questions, offer ideas, find that elusive plant or put up notices on our message board: http://nanps.org/board/frame.shtml

Sowing the Seed

by Paul Jenkins

If you stroll through a residential neighborhood these days you are likely to observe a change. Alongside expanses of manicured lawns and formal plantings, you'll find increasing numbers of gardens filled with native wildflowers and grasses.

In rural areas homeowners are installing acres of prairies and meadows. Large corporations are also embracing the concept of environmentally sustainable, low-maintenance landscaping with native plantings at their factories and office buildings. Yet, it was not so long ago that many people considered most native species to be mere weeds.

Through our retail store, Wildflower Farm, and our landscaping contracts, my wife and I talk to many gardeners who exhibit a strong desire to learn more about native plants and how to incorporate them into their landscapes. So the question arises: how, when and why did our society come to accept the concept of landscaping with native plants?

The movement originated with a few people concerned about the fate of endangered native plant communities. Inspired by their desire to preserve the genetic diversity found in local plant species, they created "restorations" which became outdoor ecological teaching facilities.

Volunteer groups across North America (the Canadian Wildflower Society which later became NANPS, the Society for Ecological Restoration and Wild Ones to name a few) began restoring native plant communities, embarking on endangered plant rescues and educating the public. As more people became exposed to native plants the concept of using them as a viable landscaping alternative for homeowners and businesses alike emerged.

With the rise in environmental consciousness in the 1980s gardeners began to re-examine their use of toxic chemicals in the form of herbicides, insecticides and fungicides. Concerns over the health and environmental implications of these preparations finally prompted governments to consider bans on the cosmetic use of pesticides. A notable case was that of Hudson, Quebec where chemical companies took the municipality all the way to the Supreme Court of Canada to challenge a bylaw prohibiting non-essential use of pesticides; the municipality won. Over a dozen other communities in Quebec have since followed



Echinacea pallida, Asclepias tuberosa, Coreopsis lanceolata, Tradescantia ohiensis are planted with grasses Schizachyrium scoparium, Elymus canadensis and Sporobulus heterolepsis in this meadow in Midland, Ontario.

Hudson's example as did Cobalt, Ontario. Now major centres such as Toronto and Ottawa are giving it serious consideration.

The advantage of native plants suited to a given environment is that toxic chemicals become unnecessary. Soil amendments are not required either, if plants are correctly matched to the existing soil, light and moisture conditions. Native plants offer viable solutions for the desperate gardener working with concrete clay or bone-dry sand since many perennials thrive in these difficult situations in the wild and, once established in our gardens, require little maintenance.

Another impetus behind native plant gardening is the innate human need for natural spaces in our increasingly hectic lives. The desire to connect with plants and animals in a natural setting is deeply rooted in our genetic code; naturalistic landscaping allows

us to make that connection.

Finally, while it is true that people often plant wildflowers (or trees or shrubs) for their own enjoyment or because they want a flower garden without all the work, many gardeners are working with native plants as a way of returning something back to the Earth. The process of establishing and restoring indigenous plant communities is a significant personal act, helping to heal our increasingly scarred planet.

By restoring the landscape to what it once might have been we are offering an unselfish act of love for the Earth and for all life. This is a quiet revolution that is happening in North America today, plant by plant, one person at a time.

Paul Jenkins is co-owner of Wildflower Farm Inc., a native plant nursery and natural landscaping company located in Schomberg, Ontario. For more information visit www.wildflowerfarm.com.

Pits and Mounds

by Mathis Natvik

Have you ever walked into a forest and noticed the forest floor covered in small craters and hills? A wooded area that has never been cleared or ploughed will be blanketed with what forest ecologists call pits and mounds. Clear Creek Forest in the city of Chatham-Kent in Ontario, an old-growth forest recently acquired by the Nature Conservancy of Canada for protection as a nature reserve, is a fine example of such topographical features.

Pits and mounds are created when large trees are torn from the ground during violent storms. A fallen tree leaves a large crater where the roots once stood. The root mass of the doomed tree drags with it a hill of topsoil mixed with subsoil. As the roots rot down over a couple of decades a mound is left beside a pit where the tree once stood. The resulting topography is critical to maintaining the biodiversity of a forest, providing ecological niches for a wide variety of plants and wildlife.

Mounds left from fallen trees provide an elevated area above the water table, where trees and wildflowers that prefer well-drained soils thrive. Tulip trees (*Liriodendron tulipifera*), sassafras (*Sassafras albidum*), many oak and ash species, dozens of shrubs and hundreds of herbaceous plants grow in Clear Creek's undulating understorey. Without the mounds the only trees that could survive would be silver maple (*Acer saccharinum*), red maple (*Acer rubrum*), cottonwood (*Populus deltoides*), red ash (*Fraxinus pennsylvanica*) and a few others that can handle wet feet.

The pits are also biodiversity hotspots. In spring they fill with water providing habitat for yellow water buttercup (*Ranunculus flabellaris*) whose small bright blooms appear in May and June. Spicebush (*Lindera benzoin*) thrives at the water's edge along with cardinal flower (*Lobelia cardinalis*), marsh marigold (*Caltha palustris*), various ferns, and skunk cabbage (*Symplocarpus foetidus*). The pools become major breeding locations for spring peepers, western chorus frogs, wood frogs, spotted, blue-spotted and Jefferson's salamanders.



An aerial photo of the Clear Creek Forest bordered by former soybean fields that were recently transformed into a landscape of craters and hills.

Sadly, in most southwestern Ontario forests there are few, if any, pits and mounds. Most of the original forests were chopped down for lumber or cleared for agriculture during the 19th century. After the stumps were removed the ground was ploughed again and again leaving the land flat with no micro-topography. Many of the remaining forested sites were heavily grazed by cattle and the mounds all but eroded away filling in the pits.

Most of the forests or woodlots we see in southern Ontario today are secondary growth and, therefore, much smaller than their predecessors. Many forests are being selectively logged for their large trees – precisely the ones needed to create pits and mounds.

When a powerful wind hits a small tree the tree usually snaps, leaving the ground intact. However, when that same wind hits a giant American beech (*Fagus grandifolia*) it literally pulls it up by the roots. Southern Ontario's forests do not have the tree structure needed to continue producing pits and mounds which were created over centuries, even millennia, as thousands of storms churned up the forest floor.

Such old-growth forests now cover only a tiny percentage of Ontario's landscape. In addition to Clear Creek, some of the best I've seen are Skunk's Misery in Middlesex County and Rondeau Provincial Park in ChathamKent. Visit any of these places to discover the fascinating ecology of ancient forests.

Not all of Clear Creek remains as original forest, however. The 333-hectare (800-acre) property also includes 77 hectares (185 acres) of old agricultural fields. This area is flat with poor drainage and supports only a limited number of species.

In March 2001, as I walked through the forest, I was amazed at the diversity of life in and around the pits and mounds. I thought: why not mimic Nature's technique in forest restoration projects?

A literature review revealed that pits and mounds had never been used in Canada for this purpose. The only reference to this technique that I found was the work of Bill Mollison of Australia who has used pits and mounds (which he calls swaling) in restoring the dryland forests of Australia and the Sahara in Africa. In his projects the pits would trap water in regions where only six inches of rain fell over two or three days in a year. Organic material would build up over time. Enough water accumulated to allow pomegranates and other trees to fruit in four to five years, helping to feed people in dryland areas of Africa. Mollison has had excellent success even in extreme desert conditions. I decided that if it works there, it should certainly work in southern Ontario. I consulted with staff at the Nature Conservancy and they were quick to agree to

a large-scale reforestation effort on the old fields at Clear Creek by creating human-built pits and mounds.

In a typical reforestation project in our area, green ash (*Fraxinus pennsylvanica var. subintegerrima*) and silver maple are planted because they are nearly the only deciduous species that perform well in post-agricultural fields. The land is generally so flat that surface water cannot drain away leaving very wet spring conditions. By summer the shallow pool of water has evaporated leaving hardpan, dry, cracked soils. Even though the site may have historically supported a lush and diverse hardwood forest, it is currently incapable of that. I wanted to change that situation at Clear Creek.

I hired a bulldozer operator and took him into the forest to teach him all about pits and mounds. After being enlightened about the benefits, he completed the most artistic job he had ever done, transforming a former soybean field into a landscape of craters and hills (after removing the underlying drainage tiles at the field outlets). This was just the effect that centuries of storms would have had on an old forest (minus the trees). The project was inexpensive at \$112 per acre, much cheaper than an ash/maple plantation which costs about \$1,500 per acre to establish.

Some changes occurred immediately. At the end of that construction day in April 2001

Clear Creek Forest And Orford Ridges Native Plants Nursery Tour

Join fellow NANPS members on a field trip to this beautiful old-growth forest and walk among majestic 350-year-old oaks, beeches and maples that stretch 30 metres (100 feet) into the sky. Touch the soil, breathe the air, see the place these trees have called home for centuries. Experience a thriving forest ecosystem.

This trip is for NANPS members only. Find out more on-line at http://www.nanps.org/clear/frame.shtml or to reserve your spot e-mail nanps@nanps.org or call 416-631-4438.



The artificially created pits and mounds at Clear Creek.

we had a downpour. I watched in amazement as stormwater flowed across the ground and pooled in the newly dug pits. By nightfall an army of spring peepers, American toads and leopard frogs had moved in from the surrounding forest and filled the night air with a deafening chorus. By morning the water-filled pits were teeming with the egg masses of amphibians.

Meanwhile, a 15-year-old green ash plantation 500 metres (about 555 yards) away on an adjacent property was silent, without a frog's song to be heard. How long will it be before that plantation can support wildlife?

On Mother's Day, many volunteers joined us to plant the mounds with tulip trees, several oaks (*Quercus* sp.), black cherries (*Prunus serotina*), flowering dogwoods (*Cornus florida*) and many other species. Willows (*Salix* sp.), spicebushes and silky dogwoods (*Cornus obliqua*) were planted along the edge of the pits. Some trees were planted in a half-hectare (one-acre) control plot that had no pits and mounds.

By June red maple, black willow (*Salix nigra*), American elm (*Ulmus americana*) and eastern cottonwood seeds had blown in from the neighbouring forest. This natural regeneration turned out to be more vigorous than anything we had planted.

I made many interesting observations during the summer drought of 2001. The trees on the constructed mounds thrived (where you would think it was tough and dry), while trees on the control plots mostly died off. The mounds remained moist during the entire drought because they drew moisture from the adjacent pit that had collected and stored water from spring rains. In the flat areas, which were devoid of places to store water, the ground had dried up and cracked. The thin membrane of moisture left from spring rains had been lost to evaporation.

Some pits actually had standing water all summer. They were fascinating to watch during a parched early-August sunset as animals came to get a drink. One by one they came: white-tailed deer, eastern cottontails, raccoons, opossums and coyotes. Clearly the constructed pits and mounds were benefiting both plant and animal life in the area.

That fall I continued to make observations on pit and mound ecology. As the oaks, hickories (*Carya* sp.) and walnuts (*Juglans* sp.) dropped their nuts, squirrels carried them from the forest and buried them in the soft mounds in the field. Have you ever left a pile of compost or cultivated soil exposed and noticed how squirrels just love to dig their treasures into the loose ground? Half the nuts will be forgotten and many squirrels will lose their lives to predators over the winter. At Clear Creek this means that hundreds of nuts

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will grow into trees.

The fall winds also blew in the seeds of white ash (*Fraxinus americana*), black maple (*Acer nigrum*) and tulip tree. It's likely that the field was also littered with sassafras seeds as well as various dogwood, cherry and viburnum seeds that have passed through a bird's gut. By spring 2002 many species that had not been planted by human hands were sprouting in the field. We had laid a foundation conducive to regeneration.

It became clear to me that natural forces have taken over and will decide the composition of the young forest. The most important thing we did was to restore the hydrology of the site, how water behaves on those former soybean fields. By making pits and mounds we created an ecological niche for all the seeds raining onto the site from natural sources. If we wish to restore southern Ontario's ancient forests, I feel that restoring the physical pre-European settlement conditions of a site is more important than what we plant. Nature will follow and put the right species in the right spot. Over the years I will watch these fields with fascination, as new species of plants colonize them one after another aided by the forces of wind, water and wildlife.

Mathis Natvik is an ecological consultant and owner of Orford Ridges Native Plants Nursery in Muirkirk, Ontario.

EDITOR'S NOTE: Due to an editorial error it was reported in the Winter 2003 issue of the *Blazing Star* that Clear Creek Forest boasts cucumber magnolia trees. In fact they are not native to that forest and were never planted there.

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In Defence of Native Plant Gardens



Although little is blooming beyond the tall Hesperaloe parviflora (red yucca) and Liatris mucronata (blazing star) in the Spanglers' front yard in mid-summer, their Texas garden still presents a charming picture.

"Maintenance – Mowing Needed". The dreaded notice familiar to native plant gardeners across the continent arrives in your mailbox. Your vibrant, low-maintenance, locally adapted garden has failed to meet the "neat and tidy" prejudices of municipal officials and turf addicts. Now you must fight to protect your beloved landscape.

Last summer Jason and Lisa Spangler of Austin, Texas received just such a notice from the Springwoods Municipal Utility District (MUD). The Spanglers had apparently violated the maintenance clause of the local bylaw which reads: "Each Owner shall keep all shrubs, trees, grass, and plantings of every kind on such Owner's Lot cultivated, pruned, free of trash, and other unsightly material." The letter threatened legal action if the couple failed to "correct" the situation within

30 days.

The Spanglers decided to marshal their forces. They broadcast an e-mailed plea for advice to Native Plant Society of Texas (NPSOT) members. As Jason noted in the message, their garden met all the stated requirements:

CULTIVATED: "We planted the plants. We care for the plants."

PRUNED: "We prune the plants regularly. We can supply a list of plants pruned last month to prove it."

FREE OF TRASH: "We pick up our neighbour's trash that blows into the garden every week."

OTHER UNSIGHTLY MATERIAL: "This is completely subjective. The front 'yard' is all garden with no trash heaps or anything like that."

Jason went on to say that they were adding more rocks to the landscape as well as signs for the sidewalk plants. They were also moving their Texas Parks and Wildlife and National Wildlife Federation (NWF) backyard habitat signs to the front of the garden and preparing an information package outlining the environmental advantages of native plants and stating legal precedents to support their cause. This done, they would invite the MUD inspector for a tour and a chat. If this approach failed, they would have to fight.

Botanist/horticulturalist Monique Reed responded to their letter praising the Spanglers for the steps taken to demonstrate that they had created a habitat. Her additional suggestions (edited for space) follow:

• Be able to prove that you are scrupulously diligent in eradicating "noxious weeds".

In Texas this means giant ragweed (Ambrosia trifida) or poison ivy (Rhus radicans) or just about anything with stinging hairs, burrs or highly allergenic pollen.

- Keep a gardening journal to demonstrate that you are actively maintaining your garden.
- Mow any areas that could be seen as lawn or make them look like intentional plantings.
- Find a competent botanist to make a good list of what you have and write a "To Whom it May Concern" letter stating that your plants are valuable natives, not unkempt weeds.
- · Respect any city right-of-way by-laws or ordinances regulating height of vegetation at driveway/street junctions.
- Try not to put the city in the position of having to make an all-or-nothing decision. They may get all and you may get nothing.
- Show that most of your plants are perennials just like the traditional garden plants. Offer photographic evidence of how the "green stuff" looks in flower.
- · Clump non-lawn grasses instead of scattering them among showy flowers. It looks less "weedy".
- · Keep a few well-maintained, edged paths that lay out the garden in beds.

- Put in a bench, arbour, birdbath or other feature that says "garden".
- Solicit letters of support from neighbours, native plant societies, schools, museums...
- Screen some of the wilder places from street view with a lattice or fence.
- Tidy away finished annuals and cut down spent perennials that you are not allowing to set seed. Tie the seed-setting perennials into neat bundles - this says: "A gardener has been here."
- At inspection time bite the bullet and water your natives so that they look their best.

Felder Rushing of the Mississippi Native Plant Society suggested that getting published in a gardening magazine, newspaper or technical journal is a distinct plus. He also stressed the value of hard features such as benches and signs or "badges" (like the NWF

Bill Seaman, a local horticulturalist, recommended an on-site meeting with the person who issued the notice. He/she should be



The trellised gate leading into the Spanglers' backyard is steadily being overtaken by Lonicera sempervirens (coral honeysuckle). The colourfully named bird pepper or Chile pequin (Capsicum annuum var. glabriusculum) lines the path in front of the gate.

asked to explain face-to-face and in writing what their expectations were in issuing the notice. Having a knowledgeable botanist/wildscaper present is a good idea, not to challenge the official but to act as a witness and to ask pertinent questions. Every exchange with the municipal authorities should be recorded. Seaman insisted that, above all, anyone dealing with such a maddening situation should remain cool and be nice.

For those forced to present their case before a municipal board, the Spanglers had a few more suggestions (also edited for space):

- Present the officials with a bouquet of flowers and grasses from your garden.
- Briefly state your case orally and in writing. Stress that your garden does not violate the rules (always come back to this point, especially when the discussion veers towards aesthetics or conformity).
- Bring copies of the professionally prepared plant list. Emphasize that no noxious weeds were found in the plant list.
- State your goal: that your landscape be found to be in accordance with municipal
- · Argue your case reasonably and calmly, even in the face of overwhelming



the right side of the Spanglers' limestone and granite path.

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Pasque Flowers of all Denominations

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criticism.

• Obtain official minutes of the meeting when they become available.

After two months of phone calls, letters, inspections and a MUD board meeting the Spanglers won their case. In the end a landscape consultant hired by the board visited their property, complimented them on their garden and, at a subsequent MUD meeting, informed the directors that the landscape was a valid xeriscape and native plant garden. The directors grumbled a bit but eventually ruled that the Spanglers' garden was not in violation of the restrictive covenants.

This article was adapted from an account of their experience posted by the Spanglers at http://jasons.wumple.com/Interests/Nature/Weed Laws/Welcome.html. Visit this site for further details.

by David Zahrt

A year ago Glenn Pollock reported seeing pasque flowers (*Anemone patens*) at Preparation Park (12 miles or 19 kilometres south of my home in Turin, Iowa) in the middle of March.

I immediately emailed him back and told him that they must be theologically illiterate pasque flowers since the word 'pasque' is associated with Easter and they are supposed to come out at Easter. Glenn wrote back to say that he had positively identified these as Unitarian pasque flowers.

At Easter that same year I went out into my native prairie and, lo and behold!, all my pasque flowers were out.

A few weeks later (end of April) I entertained Bill Witt as a visitor and on our hike we discovered a pasque flower. I apologized for it, telling him that pasque flowers were only supposed to come out at Easter. He responded that the weekend we were hiking was the Eastern Orthodox Easter.

So now we have identified three

different varieties of pasque flower. The alarming thing is that when

I went out over the hill
yesterday I discovered that
the Unitarian pasque
flowers had started to
invade our hills.
Obviously they don't
know that we subscribe to
a different religion!

David Zahrt and his wife Lin operate a bed and breakfast in Turin, Iowa where

they maintain stewardship over a loess prairie. David believes "The pasque flower is a representative of God no matter which religious faith one claims. The pasque flower is a prairie pioneer at its best in an interdependent community of plants that all support each other and take care of Mother Earth."

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New & Noted

Rare Vascular Plants of Alberta Edited by the Alberta Native Plant Council (Edmonton: University of Alberta Press, 2001. 484 pages, p.b., \$29.95 CDN, ISBN 0-88864-319-5)

This book manages to include an astonishing amount of information in a user-friendly, relatively compact and thoroughly enjoyable package. The editors (who were assisted by more than 100 individuals and groups in information collection) and the Alberta Native Plant Council should be commended for putting together this informative guide to the rare vascular plants of Alberta. The introductory material outlines the six natural regions (boreal forest, Rocky Mountain, foothills, Canadian Shield, parkland, grassland) and 20 subregions of Alberta, providing a useful thumbnail sketch of the vast patchwork of habitats that makes up this large diverse province. Of the 1,800 species of vascular plants in Alberta, the 485 species classified as rare are covered in the book. Divided into four sections (woody, herbs, grass-like and ferns and fern allies) and then into families, this guide has an entry for each plant that includes all the relevant identification information along with descriptive text, a colour photo and a line drawing. Each entry also includes two distribution maps, one showing Alberta and the other showing North America. A particularly appealing feature of the book: although the reader knows that top-notch scientific information (and what the editors call "intensive hands-and-knees ground surveys") informs the text, technical terms are kept to a minimum. For example, the editors say "tufted" instead of "caespitose," making this book not the least bit intimidating for the novice.

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Prairie Directory of North America
By Charlotte Adelman and Bernard L.
Schwartz (Wilmette, Illinois: Lawndale
Enterprises, 2002. 354 pages, p.b., \$19.95 US,
\$31.90 CDN, ISBN 0-9715096-0-3)

In my experience people who are ardent fans of prairies—backyard and wild—tend to be fanatics. (And I mean this in a good way!) We horde every available reference to far-flung natural prairie areas in the hopes that, one day, we'll load up the trailer and go on that

continental prairie tour we've always dreamed of doing. Our shelves and filing cabinets sag under the weight of prairie books and clippings and little slips of paper with notes to ourselves like "go see prairie smoke in bloom on Manitoulin Island next spring." Well, we can now retire the filing system and just buy a copy of Charlotte Adelman and Bernard Schwartz's indispensable book, *Prairie Directory of North America*.

The authors have done what every prairie fan secretly wants to do: compile a list of almost all public prairie and savanna sites (remnants, restorations and public gardens) in North America into one handy reference guide. Divided alphabetically into 32 states and four provinces, then further sectioned into counties, this guide will be of interest even if you're not planning that prairie tour any time soon. I learned, for example, that there are isolated prairies in Florida (not known as a prairie state) that evolved during the Pleistocene Ice Age. And the introductory section of the book, which provides a short history of the prairie, is one of the best short sketches of this landscape type I've read. The listings give enough detail about each site to whet the appetite, but not so much that the guide becomes unwieldy.

Sticklers for detail will cringe at some of the typographic and fact-checking errors (Lauren Brown is the author of *Grasslands*, not Loren Brown), but such mistakes are almost impossible to avoid when compiling this kind of directory and they certainly don't diminish its usefulness. Contact information for the listed sites is provided, so you can check opening times and directions.

This book is clearly a labour of love for the authors (retired lawyers who have transformed their backyard into an urban prairie) and they've done a great service for prairie fans everywhere. Order a copy (Lawndale Enterprises, P.O. Box 561, Wilmette IL 60091-0561; www.lawndaleenterprises.com) and start planning that trip!

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A Plague of Rats and Rubber Vines: The Growing Threat of Species Invasions
By Yvonne Baskin (Washington, D.C.:
Island Press, 2002. 372 pages, h.c., ISBN 1-55963-876-1)

While habitat loss has been long recognized as the major threat to biodiversity, it is only recently that attention has been focused on a second threat: invasive species. Ecologist David Pimentel estimates that in the United States alone invasive species cause \$137 billion per year in losses, damage and control expenses.

A Plague of Rats and Rubber Vines is a recent entry into the growing literature on the subject and it is a worthy addition. Taking a global approach, Montana-based science writer Yvonne Baskin looks at the causes and the ecological and economic consequences of "high-input newcomers," taking readers on a tour of grasslands, gardens, waterways and forests. She profiles individuals and organizations working to protect biodiversity and she provides useful suggestions of what individuals can do to help. Readers will no doubt be chilled to learn that few places on earth have been untouched by invasives: "Even in the Antarctic, seals have been exposed to cattle diseases and penguins to poultry virus."

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Reviewed by Lorraine Johnson

Celebrating Wildflowers

Plant Conservation Alliance's Celebrating Wildflowers 2003 calendar of events is now online. The year-long program promotes the importance of conservation and management of native plants and habitats. Celebrating Wildflowers emphasizes the aesthetic, recreational, biological, medicinal and economic values of our native flora, with over 15,000 species recognized from the United States and Canada. Guided walks, displays, presentations and a host of other events are featured. To list your own event email plant@plantconservation.org.

To open children's eyes to the wonders of wildflowers help them explore the *Celebrating Wildflowers On-Line Coloring Books* which illustrate over 500 native plants from the Northwest and Texas Hill Country.

Visit http://www.nps.gov/plants/ to discover everything PCA has to offer.

Members' Questions

"I am concerned that when my fellow naturalists and I visit a pristine site we introduce alien species, innocently and quite by accident. What measures can we take to ensure this does not happen?" - a question that many NANPS members ask

NANPS resident tree authority Tom Atkinson responds:

The first rule is to avoid such places or minimize visits. If you do go, have a second pair of shoes or boots along that you can put on when entering the area. Before leaving your house, make sure that the soles have been scrubbed clean with water and the upper surfaces have been brushed off. Check your clothing for seed "passengers" too. These steps are easy to remember and carry out. The pristine areas will thank you.

8

"What native plants can I grow under my big silver maple? The soil is very poor and dry at that corner (northeast) of my house." - Gao Luyun, Mississauga, Ontario Gardening author and *Globe and Mail* columnist Marjorie Harris
responds:

Silver maples are both gorgeous trees and all wrong for the city (of Toronto, Ontario) but many of us are stuck with them. They were hauled out of the forests where they belong and stuck as close to our sewer systems as possible. Not good for plant or house. They have shallow feeder roots so keep this in mind when you choose what to plant near them.

My solution: create 12-inch raised beds and feed both tree and plants with lots and lots of compost several times a year. [Editor's note: be careful not to build the soil up too high around a tree base as this is not healthy for the tree.] Make sure not to add plants too close to the flare of the trunk. Use plants that have shallow roots themselves and respond well to high light shade.

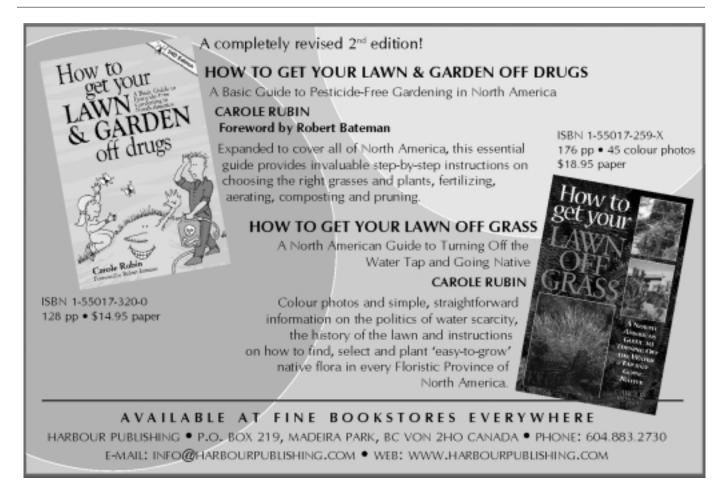
I have had success with most of these plants (in zone 6A). Chasmanthium latifolium or northern sea oats is a glorious native grass but it's also a cheerful spreader. Myrica pensylvanica (bayberry) is a wonderful shrub that comes out very late in spring but the

deep green leaves hang on for most of the winter. *Shepherdia* (buffaloberry) is a shrub I admire greatly. It has gorgeous silver leaves that stay gorgeous in just about any temperature. *Gillenia trifoliata* (also known by the botanical names *Porteranthus trifoliatus* and *Spiraea trifoliata*, and the common name mountain Indian-physic) is a favourite perennial that does very well in these circumstances producing lovely starry flowers which go on for weeks.

There are dozens of other plants that would work but in my experience these are among the best natives to cope with a silver maple.

Tom Atkinson adds:

I suggest naturalizing around the tree by allowing goldenrod, asters and other native seeds to take hold. We have leatherwood (*Dirca palustris*), bottlebrush buckeye (*Aesculus parviflora*) and black cherry (*Prunus serotina*) growing happily within the drip line of silver maples.



Calendar of Events

The NANPS on-line Message Board (www.nanps.org) now lists events. Please e-mail information about your native plant events to nanps@nanps.org. For events occuring within two months post them directly on the Message Board.

May 10, 2003

May 1-4, 2003 WILDFLOWER WEEKEND Natural Bridge State Resort Park Slade, Kentucky Visit http://www.naturalbridgepark.com.

May 4-10, 2003 15TH ANNUAL NATIONAL WILDFLOWER WEEK Visit www.nationalwildflowerweek.com for details.

ONTARIO URBAN FOREST COUNCIL
WORKSHOP
Focuses on incorporating native trees into
our gardens and keeping them healthy.
Civic Garden Centre, 7-9:30pm.
Toronto, Ontario
Contact civicgardencentre@infogarden.ca
or 416-397-1340 for details.

May 5, 2003

May 8-10, 2003
PROTECTED AREAS AND WATERSHED MANAGEMENT
University of Western Ontario
London, Ontario
E-mail wdeyoung@sympatico.ca
for more information.

May 9-10, 2003
CALIFORNIA NATIVE GRASS
ASSOCIATION ANNUAL MEETING
Seaside, California
Contact wirka@yolo.com.

May 10, 2003 NANPS PLANT SALE Civic Garden Centre Toronto, Ontario BITTERSWEET VINES: INVASIVE
SPECIES OF TURKEY POINT
A Volunteer for Nature event where participants tackle invasives such as Oriental bittersweet,

A Volunteer for Nature event where participants tackle invasives such as Oriental bittersweet, garlic mustard and Scots pine to protect a rare oak savannah. For more information about this event or other volunteer opportunities contact the Federation of Ontario Naturalists at vfn@ontarionature.org or 416-444-8419.

May 10, June 14 and June 21, 2003 BOTANIZING THE SAN JUAN ISLANDS — A SERIES San Juan Nature Institute Friday Harbor, Washington Visit www.sjnature.org for details.

May 16-18, 2003 RARE PLANTS OF THE CAROLINAS South Carolina Native Plant Society Sixth Annual Symposium, Winthrop College Rock Hill, South Carolina

May 18, 2003
TORONTO WILDFLOWER SOCIETY
WILDFLOWER GARDEN TOUR
Visits to nine native plant
gardens around the city.
Toronto, Ontario
To obtain a ticket (a booklet describing
the gardens and offering detailed maps of
how to find them) phone Carolyn King at
416-222-5736 or e-mail cking@yorku.ca.

July 3-6, 2003
STEWARDSHIP AND CONSERVATION
IN CANADA CONFERENCE
Victoria, British Columbia
See www.stewardship2003.ca
for conference details.

July 15-18 and July 21-25, 2003
WILLOW AND LICHEN WORKSHOPS
IN JASPER NATIONAL PARK
Jasper, Alberta
Contact the Prairie and Northern Plant
Diversity Centre at information@npsbc.org.

September 13-14, 2003
WILD ONES 2003 NATIONAL CONFERENCE
Shaw Nature Reserve
St. Louis, Missouri
Further info: www.for-wild.org or
dilley.2@osu.edu or 614-939-9273.

September 14-18, 2003 17TH BIENNIAL CONFERENCE OF THE ESTUARINE RESEARCH FEDERATION Seattle, Washington Visit their website at http://www.erf.org.

September 17-20, 2003
2003 NATIONAL URBAN
FOREST CONFERENCE
San Antonio, Texas
Visit http://www.americanforests.org/
graytogreen/conference.

September 24-27, 2003
NATURAL AREAS CONFERENCE
Defining a Natural Areas Land Ethic
Madison, Wisconsin
Contact information: (608) 266-0394 or
thomas.meyer@dnr.state.wi.us.

October 4, 2003 NANPS AGM Civic Garden Centre Toronto, Ontario

Details to be announced in next issue of the *Blazing Star*.



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Continued from page 1

bottlebrush buckeyes on the way home from my daughter's school near Ossington and Davenport in Toronto, Ontario. These shrubs were massed with overgrown yews tight against the shady west side of a yellow brick house. Not the most inspiring specimens, but a clear indication that this native of South Carolina and Alabama is hardy and living in difficult conditions up here. (Various sources report *Aesculus parviflora* as hardy to USDA zone 4.)

When I asked Wendy Woodworth,
Horticulturalist for the Toronto Museums,
about this plant she directed me
to one she had planted
several years ago in
a shady back
border at
Spadina
Historic

House. Although I had missed its blooms, I

could see that seeds were

beginning to form on this buckeye. Consulting Dirr again I read that he had "not noticed abundant fruit set in northern states possibly because of shortness of growing season". He cautioned that seeds not be allowed to dry out but be planted as soon as they were collected.

There was a good supply of light brown smooth seeds produced by the Spadina plant and I carefully collected a few when they had attained a size between one and two inches. I planted them in containers filled with rich soil and sank the containers into the ground in my rows of perennial divisions next to my compost bins. It was close to the Spadina Gardens Plant Sale in May when I thought of them again, as I helped to haul the perennials out of their holding beds in preparation for the sale. I was excited to see that most of the bottlebrush buckeye seeds had germinated and were sending up new growth. I carefully potted all but one of the seedlings and found new homes for them through the plant sale. The last one has been struggling along under my mature apple tree ever since; it's now up to 16".

A few years later, having planted some bottlebrush buckeyes on clients' properties, I harvested seeds once more and planted them in small pots, sinking them in the ground. This time none germinated. Even though I put netting around the pots to protect them from marauding squirrels, my early success germinating these seeds was not repeated.

The most magnificent bottlebrush buckeye I know is on a well-treed property north of Toronto in gardens that I maintain. It stands

about two metres or seven feet high (bottlebrush buckeyes can get much taller in warmer climates) excluding the foot-long flowering panicles resembling the bottlebrushes that give this shrub its common name. The showy upright spikes are bedecked with small white-petalled flowers whose curving stamens are tipped with dark red anthers. This particular specimen, planted in a shrub border under a canopy of mature hemlocks (Tsuga sp.) and white pines (Pinus strobus), flowers gloriously at the same time as trumpet lilies when no other woody plants are blooming. Since I am often too busy working to observe the flowers for long, I have not seen the many species of butterflies and insects that

reportedly visit them frequently. The flowers must be successful in attracting pollinators since this plant has little difficulty producing seeds.

Bottlebrush buckeye has lustrous, large, dark green, palmately compound leaves typical of the chestnut family. Unlike the exotic horsechestnut, *Aesculus*

hippocastanum, it appears immune to the many pests and diseases that discolour and ruin the leaves of other plants of this genus. In fall the leaves turn a clear yellow before dropping to reveal the elegant curving branch structure that will grace the winter garden.

This shrub is suitable for even the most difficult growing situation - under the dreaded Norway maple (*Acer platanoides*). With a little irrigation and occasional top dressings of compost several bottlebrush buckeyes I know are doing well under these common Toronto residential trees. In deep shade they do not produce as many flowers as they would in sun, but the shape, leaves and carefree nature of this plant more than recommend it for difficult

situations.

Some experts suggest that bottlebrush buckeye grows too large for a small garden; they even recommend cutting it to the ground if this becomes a problem. I think that with some allowances for its eventual wide girth (perhaps as much as twice its height), it can happily be sited in many cultivated and naturalized settings.

The only problem I have had with this plant is acquiring decent-sized specimens. My limited experience would indicate the bottlebrush buckeye is difficult and slow-growing when starting it from seed. Even when the suckering growth is used to produce new plants - a much faster method - I have found that the resulting plants are often a bit pricey at nurseries. This confirms the investment in time made by growers.

When purchasing Aesculus parviflora check that it was grown in your area to ensure hardiness there. Many marginally hardy and hard-to-source plants are imported from distant nurseries (bottlebrush buckeyes among them). Plants from Carolina may not be hardy in the Toronto region but local stock would.

The addition of a bottlebrush buckeye to your garden or woodland will repay you with many seasons of pleasure.

Catherine Siddall designs, builds and maintains gardens. She is a long-time member of the Toronto and Parkdale Horticultural Societies and NANPS. Catherine is also a partner in Siddall and Cope which offers services to groups wanting to establish community gardens or naturalization projects. She can be reached at (416) 531-2253 or rc.siddall@sympatico.ca.

EDITOR'S NOTE: It is not NANPS' policy to advocate the planting of native species outside their natural range.

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