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Volume 2, Issue 1



Newsletter of the North American
Native Plant Society

The Blazing Star

Patience and Promise: Orchid Conservation in Mexico

by Tegan Wong

The truck veers around another turn along the highway up to La Trinidad, we pass the turn-off for the town and continue the climb to the orchid sanctuary, our destination this brisk Saturday morning. We turn onto a dirt logging road and jolt up and down in our seats as the truck lurches over rough terrain. The truck slows to a crawl and stops. I get out and look up: a huge pine tree stretches to the sky. I am reminded of an old-growth white pine I rested under in Temagami. However, this is not the old-growth forest of Northern Ontario. I am in Mexico, in the pine-oak forests of the Sierra Madre, in the southern state of Oaxaca, where towns are built into steep mountainsides overlooking the endless ripples of earth, rock and forests. The locals have good calf muscles.

This winter I've exchanged my snowshoes for hiking boots to work with a community organization called Unión de Comunidades Zapoteca-Chinanteca (UZACHI). UZACHI is the technical unit responsible for the careful management of four community forests in the Sierra Madre. This includes providing training and support to develop local skills and knowledge in ecologically sound forestry. The primary product is a healthy forest for the long-term vitality of the communities. Orchid research and conservation is one part of the holistic approach UZACHI promotes.

Why Orchids? Orchidaceae is one of the largest families of flowering plants in the world, containing about 19,300 species. Highly complex, beautiful and even bizarre, orchids have captured the admiration of humans throughout history. But this admiration has also assisted in their demise: severe habitat loss and wild harvesting of prized orchid species have endangered their very survival. UZACHI recognizes that the first step towards orchid conservation is sensitive management of their habitat: the forest. Together with field research, protected areas, orchid propagation and education, UZACHI is trying to incorporate orchid conservation into community awareness.

My mentor is Gabriela Perez Pablo, the Mexican biologist who coordinates the orchid research. She has helped set up three orchid sanctuaries and leads the efforts to propagate native orchids from seed. Part of my work here is spent in a remote laboratory preparing culture medium and gently sprinkling the minute orchid seeds in sterile glass jars. The process is not too difficult, but it takes patience. Orchids are pollinated in the orchid sanctuaries. Using nothing more than a sewing needle (or equivalent), pollen is transferred from one flower to the other. In a week or two the ovary begins to swell as the capsule

develops. For most of the orchids here it takes a year or more for the capsules to fully mature. The capsules are collected and the seeds are sown in a nutrient-rich medium. Although each seed capsule produces thousands of seeds, the survival rate is small in the wild. Most orchids need specific conditions in order to grow and develop successfully. By nurturing the seeds, we have increased the germination success, yet still the growth is slow: it may take four to five years for a flowering-sized orchid to develop.

After a week spent working in the laboratory sowing orchids in the sterile environment, it is wonderful to be back in the forest, breathing in the smells of pine needles and moss. We finish pollinating the flowering plants and weeding a bed of terrestrial orchids in time to meet a gaggle of giggling Grade 4 students and their teacher at the entrance to the orchid sanctuary. They have come to learn about orchids. If healthy communities and healthy forests are the long-term goals, then the more young people involved, the better. The children sit in a pocket of sun that has broken through the canopy and listen as Gaby explains the special characteristics of orchids and what she and others are doing to try to keep them growing in the local forests. The students are then let loose, to find and smell all the orchids they can. There are more than fifty different species of orchids in the sanctuary. Not many are in flower at this time of year, but the students notice the mottled pattern of some leaves and the strange-looking roots that can survive on moisture in the air and pockets of debris. The students are full of questions. A boy spots an orchid growing on a tree stump with small fuchsia flowers growing up a slim stalk. He calls his classmates over and they peer intently at the discovery. The magic of nature's most complex and bizarre flower has cast its spell once again.

For UZACHI, the orchid project may someday provide economic benefits for the remote mountainous areas of Oaxaca. Indiscriminate harvesting of wild orchids must stop, yet the market for orchids is ever increasing. Certification of orchids propagated from seed in an ecologically respectful way is one option being explored by local and international environmental organizations concerned about the general decline of wild populations. Like orchids themselves, certification may take years to grow from an idea to reality. Sharing practical experience, especially of community-based initiatives like UZACHI, will be important.

continued on page 3

The Blazing Star is...

The Blazing Star is published quarterly by the North American Native Plant Society. The views expressed in this newsletter are those of the authors and not necessarily those of the Society.

The North American Native Plant Society is dedicated to the study, conservation, cultivation and restoration of North America's native flora.

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Meet the NANPS Board

The North American Native Plant Society is run by a Board of volunteers who are committed to native plant study, conservation, cultivation and restoration.

Sarah Augustine is studying part-time in the University of Toronto's collaborative program in Global Education and Environmental/Humane Studies. She has been gardening with native plants for approximately five years, based on her interest in bringing the natural world into her life, supporting the fauna of her bioregion (the Great Lakes watershed) and her feeling that we need to rebuild our connection with nature.

Catherine Crockett is a reformed computer nerd who now operates Taddle Creek Nursery and propagates ferns in the Annex neighbourhood of Toronto. She originally got interested in native plants as a way to increase habitat in her garden. She is currently trying to decrease squirrel habitat.

Deborah Dale graduated from the University of Toronto, and has worked for a number of government agencies in the areas of waste management and the environment. She is currently working with Toronto-area schools on naturalization projects.

Jim French founded the Canadian Wildflower Society (the precursor to NANPS) in 1984 and has served on the Board of Directors ever since. An avid native plant gardener, he has created a wildflower preserve, featuring a prairie, bog, lakeside and woodland, at his cottage near Stoney Lake, Ontario.

Cathy Hayes is an Occupational Therapist who only recently became interested in gardening and, from there, became interested in native plants.

Lorraine Johnson is the author of seven books, the most recent of which are *100 Easy-to-Grow Native Plants* and *The New Ontario Naturalized Garden*. She has a regular column in *Canadian Gardening* magazine and is active in the community gardening movement in Toronto, Ontario.

Donna McGlone was "turned on" to native plants when she discovered that so many of her favourite perennials were "natives." An avid gardener, Donna is also passionate about her husband, kids, granddaughters and her pets. As past president of the Credit Valley Horticultural Society, she continues to be heavily involved in many projects, including the restoration of a former landfill in Mississauga, Ontario.

John McGlone is married to Donna McGlone, who has brought the excitement of horticulture, heritage gardening and native plants into the life of this environmental engineer and forensic investigator. He joined NANPS to broaden his experience with native plants and great people, having found over the years that gardeners are by and large "salt of the earth" people.

Daisy Moore is a garden designer and radio broadcaster who hosts a gardening program on CHML (AM 900). She graduated from the University of Guelph with a Bachelor of Science in agriculture, specializing in horticulture. She has spent many years working in commercial horticulture and is an avid gardener. Her Website address is www.daisymoore.com.

Trish Murphy lives in Toronto, Ontario, and has an unseemly fondness for woodland sedges.

Erika Thimm is a naturalist, professional photographer and native plant consultant based in Prince Albert, Ontario. Since 1994, when she was given the challenge to create and manage a 7-acre wildflower park at Cullen Gardens in Whitby, she has focused most of her attention on Ontario's native plants.

Cora Thomson is a restoration biologist who is currently working with the City of Toronto on the restoration of High Park.

If you are interested in volunteering your time for NANPS, please contact us at (416) 680-6280. We would particularly value assistance in the following areas: staffing the NANPS booth at events and helping out with our annual plant sale (held in Toronto, Ontario).

NANPS News

We're looking for nominations for the Paul McGaw Conservation Award, an annual NANPS award (recently renamed in honour of Paul McGaw--see Fall/Winter 2000 issue of *The Blazing Star*). The award recognizes the outstanding contributions of an individual or organization to the conservation of native plants in North America. Please submit nominations (including contact details and background information) to nativeplantsoc@yahoo.ca or mail to NANPS, P.O.Box 84, Station D, Etobicoke, Ontario M9A 4X1; (416) 680-6280.

Help NANPS save on printing and mailing costs by receiving *The Blazing Star* electronically. Simply send your e-mail address to nativeplantsoc@yahoo.ca and let us know that you'd like to receive the newsletter via e-mail.

Patience and Promise—continued from page 1

Gaby brings my attention to a tiny, bright green orchid growing suspended on a branch. She loves how green and healthy it is. She says this is the test: if the forest is healthy, the myriad of life within will be healthy, too. This is the true challenge in all our endeavours to live lightly on this earth.

For more information about UZACHI or to make a donation, contact Gabriela Perez Pablo, UZACHI, Capulpan de Mendez, Ixtlan, Oaxaca, c.p. 67860, Mexico.

Tegan Wong is a biologist working for Falls Brook Centre, an environmental community-development organization in rural New Brunswick, Canada. Currently, she is on a five-month CIDA internship in Mexico sharing and learning about community forestry and appropriate community development. She returns to New Brunswick this spring to continue establishing native plant nurseries and organic gardens, and working towards ecological forest restoration at the local level.

A Grade 4 student from La Trinidad shares his discovery with his classmates and teacher in the Orchidario of La Trinidad, Oaxaca



photograph courtesy Tegan Wong

Spring 2001 NANPS Plant Sale

Saturday, May 12, 2001
10 am - 4 pm

Civic Garden Centre, 777
Lawrence Avenue East (at
Leslie Street), North York,
Ontario

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thousands of plants.

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Please consider donating
your native plant divisions
to the NANPS plant sale.
All donations of native
plants are welcome and will
be acknowledged in the
newsletter. As well, volun-
teers to assist with the sale
are needed—duties range
from helping to set up the
room prior to the sale to
staffing tables during the
sale. To help out or donate
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Native Plant to Know

Sassafras (*Sassafras albidum*)

by Tony Jovan

GENUS: *Sassafras albidum* is the only species of the genus sassafras native to North America. It belongs to the Lauraceae family, which is mainly tropical and subtropical. Other members of this family are Spicebush (*Lindera benzoin*), which is found in Ontario, Cinnamon Tree (*Cinnamomum zeylanicum*), Camphor Tree (*C. camphora*), Sweet Bay (*Laurus nobilis*), and Avocado (*Persea americana*).

ETYMOLOGY: Sassafras was the popular name used by early French settlers in Florida and was adopted as the botanical name.

HABITAT: It occurs on nearly all soil types within its range, but is best developed on moist, well-drained sandy loams in open woodlands.

RANGE: Sassafras is native throughout most of the East, South and Midwest of North America. It is restricted to the Deciduous Forest Region of Ontario, and not found north of Toronto.

LONGEVITY: Perennial and deciduous, sassafras is known to reproduce vegetatively and therefore a colony of clones can represent an individual predecessor. The colony itself may be much older than the current oldest individual stem.

FLOWERING: Small greenish yellow flowers appear before the leaves in the early spring, which makes the trees look like clouds of gold when viewed against a dark background. Most individual trees are either male or female (dioecious).

FEATURES: The sympodial, candelabra-like branching structure forms graceful horizontal layers, like some of the dogwoods (lateral twigs from current buds

initially outgrow the terminal shoot). A very intriguing winter silhouette results from the branching habit. The bark of young stems is light green; that of older stems is deeply furrowed, or irregularly broken into broad, flat ridges. The leaves are smooth, sweetly fragrant when crushed, and 7 to 18 cm (3-7 inches) long. The variety of leaf shapes to be found on one individual is a distinctive trait of this species. Leaves can be unlobed, or with two or three lobes. This trait lends to the common name, Mitten Tree. The leaves are bright yellow-green in spring, maturing to a blue-green in summer and turning brilliant shades of red, gold, orange or purple in the autumn. All parts of the tree are pleasantly aromatic. In fact, it is difficult for one to keep from "scratching and sniffing" this tree.

FRUIT: The female bears lustrous dark blue fruit (with a fleshy layer surrounding one or more seeds) on bright scarlet stalks in late summer (reminiscent of a golf ball on tee). Good seed crops are produced in alternate years.

HEIGHT: Single-stemmed specimens growing under favourable conditions can reach dimensions of over 18 m (60 ft) in height and 100 cm (3 ft) in diameter. Large specimens can reach 30 m (100 ft) in height. More frequently, it is found as a small tree.

CULTURE: Sassafras requires full sun for best growth. It is difficult to transplant; container-grown stock, seed or seedlings are recommended. It is intolerant of road salt and ozone pollution. Root suckering is prevalent in sassafras. It is less likely to send up suckers if its roots and stems are not damaged or disturbed.

NOTE: Sassafras is allelopathic and can



discourage the growth of certain other plants within its root zone.

ECOLOGY: Sassafras is a fire-adapted species. It is quite resilient to such disturbance, and post-fire regeneration occurs in several forms or strategies: adventitious buds at root crowns (suckering), ground residual colonizer (i.e., existing seed bank), initial offsite colonizer (i.e., seed dispersal) and crown residual colonizer (remaining undamaged stems). Sassafras can also be found in late seral stages of succession. It can maintain a presence in climax forest stands in the canopy layer by gap-phase regeneration. It has been found that by maintaining a presence in the shrub layer (as stunted individuals, viable ramets (roots) of existing individual trees, seedlings or via the seed bank), this tree is able to exploit canopy gaps. The ripe fruit is sought by squirrels and many birds (bluebirds, catbirds, vireos and quail). These same animals are the disseminating vectors. Sassafras serves as a host plant for one of our most spectacular butterflies, the colourful spicebush swallowtail.

NOTE: The First Nation peoples utilize sassafras in flavouring foods and in herbal remedies. The roots are used to provide root beer flavour. It is also an important ingredient in Cajun and Creole gumbos.

The filé powder used in this dish is in fact a culinary creation of the Choctaw Indians native to Louisiana: gumbo is the derivative of Kombo, the Choctaw word for sassafras. Sassafras oil is extracted from the root bark for use by the perfume industry, primarily for scenting soaps. It is also used as an antiseptic. The wood is very durable, and was once used for dugout canoes.

Filè powder is a thickening agent used in gumbo (a stew) to give this dish its characteristic glutinous consistency. The powder has a delicate flavour, reminiscent of thyme or savory. To prepare filè powder, gather leafy branches from sassafras trees in spring. Let the branches dry. When the leaves become brittle, strip them from the branches, and pulverize them in a mortar with a pestle. Sift out any bits of stem, and pulverize again. The resulting filè powder can be stored in tightly closed bottles.

Source: *American Cooking: Southern Style*, with thanks to Dagmar Baur for providing this source.

SOURCES:

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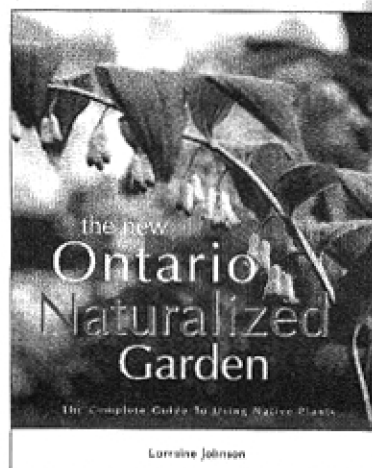
(The structure of this article follows that used by Zile Zichmanis and James Hodgins in their wonderful book, *Flowers of the Wild: Ontario and the Great Lakes Region*, published by Oxford University Press, 1982.)

Tony Jovan is co-chair of the High Park Volunteer Stewardship program in Toronto, Ontario.

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Mark Cullen, garden columnist for *The National Post*, and Gardening Author



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Have a question about native plants? Post it on the NANPS Website's Message Board (www.nanps.org) and receive answers from NANPS members and volunteers. This is a great forum for sharing information with native plant enthusiasts.

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Working for Wildlife: The Fletcher Wildlife Garden in Ottawa, Ontario

by Sandy Garland & Claudia Burns

The Fletcher Wildlife Garden (FWG) is a project that the Ottawa Field-Naturalists' Club started in the early 1990s. The garden is managed by a committee of the club and all work is done by volunteers. The club was lucky to find an ideal site for the project just south of the Dominion Arboretum in Ottawa, on property owned by Agriculture and Agri-Foods Canada, a federal government department. The garden has two main parts. Most of its seven hectares is devoted to recreating some of the habitats typical of eastern Ontario: for example, new and mature woodlots, an abandoned field, a pond and thickets. In the other main part, the Backyard Garden, we are scaling these habitats down to backyard size to show visitors what is possible in their own urban yards and parks.

Why "garden for wildlife"?

Our cities and our farming practices have completely altered the landscape and ecology of North America and are changing the environment in dangerous ways. In the spirit of "thinking globally and acting locally," we can all recreate some of the habitat destroyed by urbanization. At the same time, we can enliven our gardens with birdsong, fluttering butterflies and trickling water; avoid using harmful pesticides; and create a beautiful place to enjoy nature.

What is a wildlife garden?

A wildlife garden is one that contains shelter, water and a wide variety of berries, seeds, nectar and food plants to attract many species of birds, butterflies, insects, reptiles, amphibians and small mammals. All waste material is recycled and no chemicals are used.

Our Backyard Garden

The FWG Backyard Garden is located behind our Interpretive Centre on a flat hill overlooking the Dominion Arboretum and Dow's Lake. A treed ravine runs along the south side of the garden. The garden beds contain a wide variety of plant species, mostly perennials. Although the emphasis is on native species, there are also many horticultural varieties and alien species that are used by wildlife.

Shrubbery forms the skeleton of the Backyard Garden. We have thick clumps of elderberry, flowering raspberry, spirea and serviceberry around the back side of the pond and forming a semi-continuous, staggered line toward the bird feeder near the entrance to the garden. The feeder is important in

winter, but the shrubbery provides shelter, nesting spots in spring and fresh fruit in summer.

An essential component of our garden is the pond, which we constructed using a flexible liner with gently sloping sides. Birds flock to the water, sit on the rock wall behind it, drink and bathe. The water level is maintained using a float system, which senses when the level drops due to evaporation, opens a valve and lets in water until it reaches the set level. The sound of running water is important in attracting birds. Green frogs live in our pond throughout the growing season, though we're not sure if the tadpoles and adults are able to overwinter in the fairly thin layer of mud and debris on the pond's bottom. American toads live in the garden and lay eggs in the pond. As they mature, they congregate in the shallow water around the edges. Native plants in and around the pond, such as marsh marigold, cardinal flower, sedges and elodea, provide protection and shade for the tiny new toads.

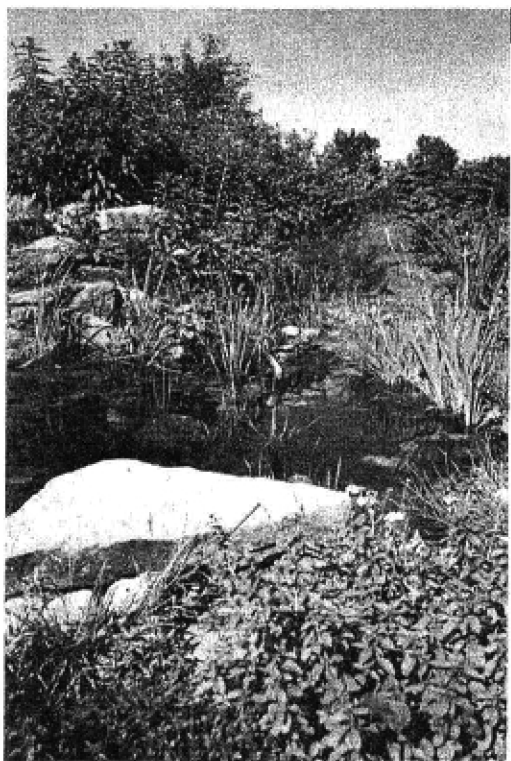
Throughout the garden, the catchword is biodiversity. We believe that a wide variety of plants will attract many different species of birds, small mammals, butterflies and other insects, and (we hope) keep any single species from getting out of control. In the centre bed, the emphasis is on plants that attract butterflies. There is always something blooming—from coltsfoot in April to New England asters well into November. The treed ravine next to the garden means that we also have several species of overwintering butterflies, such as Milbert's tortoiseshell and mourning cloaks. We've seen monarch butterflies on Joe-Pye weed, coneflowers and New England asters. Black swallowtails are regular visitors and lay eggs on Queen Anne's lace and angelica. We've enjoyed seeing American ladies on our now-large clumps of pearly everlastings. They also lay eggs, and their caterpillars build leaf nests in the tops of the growing plants. Even though we had up to six caterpillars per plant last summer, the everlastings still bloomed prolifically, so we didn't begrudge the caterpillars any buds they ate. Including larval food sources for butterflies in our garden is essential, as we want the adult butterflies to stay around and lay their eggs. Apple trees, willows, and a variety of grasses complement the flowering perennials and increase the variety of species that visit our garden.

We've taken advantage of the

trees on the south side of the garden to create a woodland area between a hedge of red osier dogwood and the top of the ravine. Woodland species such as trilliums, trout lily, foamflower and violets are common in our region. We've added the more rare wood poppy and bulblet fern, and were delighted to discover that there are also woodland species of goldenrod (zig zag and bluestem) and asters (whorled) we can add to our shady area. Forests have rich soil that is constantly replenished with decaying wood and leaves, so we've included fungus-covered logs and wood piles in our woodland beds and regularly mulch them with leaves and compost.

What do we mean by "native"?

This question is often hotly debated by our volunteers. Purple coneflowers may be native to North America, but not to the Ottawa area. Queen Anne's lace is ubiquitous and loved by swallowtail butterflies, but should we exclude it because it's "alien"? We've planted both of these species in our Backyard Garden, but a few years ago we also established a bed that is "strictly native," with plants that are indigenous to our region of eastern Ontario. This bed is still in the experimental stage (the whole garden is, for that matter), so we're



The sloping edge of the backyard garden pond provides easy access to wildlife. Rocks provide perching and hiding spots.

photograph courtesy Sandy Garland



American goldfinch finding seed on an evening primrose.

thinning and repositioning the many species of asters and goldenrods, encouraging the fireweed, suppressing the saw-toothed sunflower (which grows 8 feet tall in the garden) and trying to figure out what native species bloom in full sun in early spring.

More information

We hope you have a chance to visit our garden and are inspired to adopt some of our methods: biodiversity for balance; food, shelter and water for wildlife. If you can't get to Ottawa, please visit our Website (<http://www.achilles.net/ofnc/fletcher.htm>) and take a "virtual tour." We are also very interested in documenting wildlife use of the plants and other features of our garden. And we'd love to hear about your observations, so please e-mail us at sgarland@achilles.net or claudia_burns@hotmail.com.

Sandy Garland and Claudia Burns are on the Fletcher Wildlife Garden Management Committee.

Contact info: Fletcher Wildlife Garden c/o OFCN, PO Box 35069, Westgate PO, Ottawa, Ontario K1Z 1A2; (613) 730-0714; ofnc@achilles.net.

Do you have a native plant garden that you would be willing to showcase as part of a NANPS garden tour? Or would you be interested in listing your native plant garden on the NANPS website, with days you would be willing to open the garden to NANPS members? Please let us know! Call (416) 680-6280.

Calendar of Events

EVENTS

March 14–18, 2001; Metro Toronto Convention Centre, Toronto, Ontario: **Canada Blooms**. Visit the NANPS booth at H12, 800 level.

March 21, 2001 7:30 pm; University of Guelph; Guelph, Ontario: **Purple Loosestrife**: The Dogtooth/Waterloo-Wellington Wildflower Society monthly meeting has Carole Ann Lacroix providing an update on her purple loosestrife research. Call (519) 824-4120.

March 28, 2001 7:30 pm; Beaches Recreation Centre, Toronto, Ontario: **Wildflowers of North Carolina**: Larry Lamb speaks to the Toronto Wildflower Society. Call (416) 222-5736.

April 18, 2001 7:30 pm; University of Guelph, Guelph, Ontario: **Native Grasses**: A hands-on workshop presented by the Dogtooth/Waterloo Wellington Wildflower Society.

April 21, 2001 1–4 pm; Civic Garden Centre, Toronto, Ontario: **Society of Ontario Nut Growers auction**; call (416) 397-1340.

April 22, 2001; Oxford Station, Ontario: Earth Day is "open garden day" at the **Old Field Garden & Wildflower Nursery**; contact (613) 258-7945.

April 25, 2001 7:30 pm; Beaches Recreation Centre, Toronto, Ontario: **How to Photograph Wildflowers**: Nancy Mungall speaks to the Toronto Wildflower Society. Call (416) 222-5736.

The following walks take place in High Park, Toronto, Ontario (meet 1:15 pm at the benches south of Grenadier Cafe). For more information, call (416) 392-1748.

March 11, 2001: Exploring High Park

March 25, 2001: High Park's Creeks and Ravines

April 29, 2001: Restoration Efforts in the Park.

NATURE TRIPS

For information about the following Cygnus Nature Trips, call (416) 526-7809.

April 21, 2001; Cambridge, Ontario: Rituals of Spring—Salamanders, Frogs & Turtles

May 26, 2001: Waubesa, Ontario: Explore Matchedash Bay by Canoe

June 9, 2001; Kirkfield, Ontario: Birds, Botany & Butterflies of the Garden Alvar

WORKSHOPS

April 4–May 9, 2001: Woodland Ephemerals; spring workshop (\$75) at Old Field Garden & Wildflower Nursery, Oxford Station, Ontario; (613) 258-7945; oldfieldgarden@sympatico.ca.

CONFERENCES

Creating a Natural Landscape VIII March 31, 2001; Muskegon, Michigan. For more information, call the Muskegon Conservation District at (231) 773-0008.

Woods Talk June 14–17, 2001; Toronto, Ontario: Authoritative speakers and workshops provide a unique opportunity to gain practical information about woodland conservation in Ontario. Call the Federation of Ontario Naturalists, (416) 444-8419.

OPPORTUNITIES

The Rare Plant Care and Conservation Program at the University of Washington, in conjunction with the Washington Natural Heritage Program (NHP), is launching the Rare Plant Monitoring Program. This program will involve volunteers in data collection on Washington's rare plant populations. For more information call Laura Zybas at 206-616-0780; e-mail lzybas@u.washington.edu.

Evergreen's Where Edges Meet Community Wildflower Gardens are looking for green thumbs interested in community greening in Toronto, Ontario. For more information contact Anne Marie Lewis at (416) 596-1495 x27 or e-mail amlewis@evergreen.ca.

Wildwood Forest, on southern Vancouver Island, B.C., is the oldest example of ecoforestry on the west coast of North America. The Land Conservancy of B.C. is attempting to raise \$1 million to purchase the 70-acre model of sustainable forestry practices and guarantee its permanent protection as a demonstration forest and educational facility. To make a donation, call (250) 479-8053.

The Tallgrass Prairie and Savanna Association would like to hear about local initiatives in Ontario to conserve and restore endangered prairie and savanna habitat. Send information about your project to 659 Exeter Road, London, Ontario N6E 1L3; (519) 873-4631.

High-Tech Hints: Finding Native Plant Info on the Web

The World Wide Web is a huge and daunting network. When you are searching for information, you are, quite literally, caught up in a world-wide web of connections and contacts and leads that can be more than a little bit overwhelming—and exhilarating. The complexity of the Web is both its strong point and its drawback. On the one hand, you can access information from just about everywhere; on the other hand, you can get lost—very lost—easily. We asked a number of Web-savvy gardening folks for guidance, and the following tips should help you to find good native plant information—or, at the least, help you to spend many pleasant hours in cyberspace.

TIPS FROM LORRAINE FLANIGAN:

Searching for information on the Internet can be as frustrating as tracking down a blossoming *Sabatia kennedyana*. (Hint: you'll find Plymouth gentian in Nova Scotia.) If you know where and how to look on the World Wide Web, you'll be more successful in your searches. Here are two tips for finding good native plant information on the Web:

Find a guru: Websites such as about.com and suite101.com retain "gurus" or experts on a subject who write about the topic and link their readers to other good Websites.

Get in touch: If you have e-mail, you can get in touch with native plant enthusiasts around the world. For example, through an e-mail posted to a listserv, you can find out where and when Plymouth gentians bloom. Here are a few listservs that you might want to check out:

* Northeastern Wildflowers: <http://www.egroups.com/group/a-northern-wildflower>

* Endangered Plants: http://www.egroups.com/subscribe.cgi/Endangered_Plants

* Ipine-L: <http://www.alastra.com/pam/groupsA/alpine-l.html>

You can also find listservs through egroups.com, Liszt.com, and [List of Lists \(catalog/Vivian/interest-group-search.html\)](http://List of Lists (catalog/Vivian/interest-group-search.html)).

Lorraine Flanigan is a freelance writer and instructor of Internet search techniques.

TIPS FROM JACK SANDERS:

The biggest trick in using the Web for anything is using search engines effectively. Two of the best are AltaVista (<http://www.altavista.com>) and Google (<http://www.google.com>). When I use AltaVista to do a search, I use two techniques that help focus the search. One is to quote the exact phrase I'm looking for and the other is to demand that certain terms be in the page I'm looking for.

Quoting is simple. Just put quotation marks around the words. For instance, if you are looking for something about the origin of the term "stinking benjamin" as a name for purple trillium, then place quotation marks around "stinking benjamin." That means only documents containing those two words in a row will be returned by the search engine. (A quick search found 50 pages cited by AltaVista that contain this exact phrase.)

Now, to narrow the search further to pages that might discuss the origin of the name, you can use the + sign to demand that additional terms be present, but not necessarily in order. So we ask AltaVista to search for both the phrase "stinking benjamin" and the word "name." Into the search field, type: + "stinking benjamin" +name (there's a space in front of the + before "name"). After I did that, AltaVista returned 24 pages. How about an even finer search? Let's add the word "origin": i.e., + "stinking benjamin" +name +origin. The result is two pages. It turns out that one of them partially explains the name stinking benjamin (why it's stinking but not why it's benjamin). Most people, maybe, would be happy with that, but I also think it's interesting that benjamin is not a person's name, but a corruption of benzoin or benjoin, a strong-smelling Sumatran plant. Getting back only two pages may indicate that the search was too restrictive, and it would probably be a good idea to check at least some of the 50 pages that came back on a search for + "stinking benjamin" +name.

Another tip for searching for information on wildflowers is to use scientific terms. Your odds of getting good, focused information about bluets are better if you search for "Houstonia caerulea" (132 pages returned) rather than bluets (1,046 pages). Looking for scientific names will always return some pages with just long lists of wildflowers, but you will also find ones that tend to be more authoritative and descriptive. But searching for "bluets" along with something you are

trying to learn about them may be useful. For instance, what kind of soil do bluets like? Try +bluets +soil (126 pages) or add +type (56 pages) or instead of "type," the word "conditions" (57 pages).

Another tip is that when you get 50 or 100 pages returned from a search, look not only at the headings and descriptions for the pages, but also the Website addresses. Addresses that end in .gov or .us are governmental Websites (in the States), and may have more authority to them—and more up-to-date research. Same with .edu, which is the suffix used by educational institutions.

Jack Sanders is the author of Hedgemaids and Fairy Candles: Lives and Lore of North American Wildflowers.

TIPS FROM JANET EVANS:

My suggestion relates to using search engines, directories, special databases and library online catalogues. When your search for the phrase "native plants" doesn't yield the information you seek, consider using other phrases such as:

native trees; native shrubs; native plant gardening; meadow gardening; prairie gardening; wildflower gardening; wildflowers; wild flowers.

Janet Evans is the Library Manager of the McLean Library, Pennsylvania Horticultural Society, and the editor of the excellent online newsletter The Wired Gardener. To subscribe to this free, monthly e-mail newsletter, send an e-mail message to LISTSERV@HSLC.ORG. Leave the "subject" line blank, and in the body of the message, type SUBSCRIBE WIREDGARDENER yourfirstname(space)yourlastname.

TIPS FROM LAURA BERMAN:

Virtually every gardening Website puts out their own newsletter and I subscribe to them all. As well, the big listserv Egroups.com has many lists about all sorts of gardening topics.

One very important tip when subscribing to listservs: always get the digest form. Otherwise you'll get every single posting as a separate e-mail. Some of these lists are very active and it's not unusual to get 30 e-

mails a day. One that's particularly active, and very interesting, is called Wild Forager (<http://www.egroups.com/group/WildForager>).

I always check the "links" section at every Website—I've found that one Website always leads me to another one.

Laura Berman compiles a weekly electronic newsletter for the Toronto Community Garden Network (cgnetwork@foodshare.net).

TIPS FROM LINDA READ:

There are native plant societies, educational and botanical institutions, gardeners, botanists, seed companies, landscapers and passionate amateurs who have taken the time and effort to put all kinds of information about native plants on the Web. The amount and variety of information is staggering. There are huge databases, which are fabulous sources of information on every kind of North American plant; some databases also have photographs. Two of the most comprehensive are:

* The PLANTS Database (http://plants.usda.gov/plants/home_page.html): This award-winning site has information on just about every plant in the U.S. and its territories.

* Flora of North America Website (<http://hua.huh.harvard.edu/FNA/>): This site has the currently published volumes of the epic *Flora of North America* online.

I have found my humusy-northeast-temperate-zone soul challenged by the desert. Maybe it's because there is a foot of snow outside, but I have been drawn to the North American desert and scrub. The Web has wonderful sites where you can come to understand a system and an ecology different from your own. The Arizona-Sonora Desert Museum (<http://www.desertmuseum.org/index.html>) is a wonderful source of information about the Sonoran Desert, the people who live there and the way plants are used. The Arizona Native Plant Society (<http://www.azstarnet.com/~anps/>) is a good source of information, but more than that, they run a list, a forum to which one can subscribe and read the logs of messages. During a northern winter, it is very exciting to read the reports of desert annual flowers coming into bloom.

For me, the best sites are those made by individuals with a passionate interest in native plants. I have enjoyed watching the

ongoing construction of Doug Von Gausig's Website, Common Plants of the Verde Valley & Sedona (<http://www.naturesongs.com/vvplants/>). He has assembled a great selection of desert plant photos, but there is also his collection of sounds. Not only can I look at the plant photos, I can click on his recordings of birds or the rain falling in Arizona, and think about how soon I can get there myself.

Linda Read lives in Toronto, where she struggles to grow the world's smallest prairie and also woodland plants that mostly disappear once it gets warm.

TIPS FROM DEBORAH DALE:

The Internet reminds me of Isaac Asimov's Encyclopedia Galactica—you start with a few key words and follow where they lead. Just remember to bookmark any really good sites, as you may never find that stream again. A couple of good sites are: www.tallgrassontario.org and www.prairienet.com.

Deborah Dale is coordinator of the North American Native Plant Society's Website (www.nanps.org).

TIPS FROM ANDY WASOWSKI:

If anyone has any doubts about the advances we in the native plant movement are making, just check out the many native plant Websites now available—with more coming all the time. One of the best and most important is the Lady Bird Johnson Wildflower Center in Austin, Texas (<http://www.wildflower.org>). This is the clearinghouse for info on our movement, with their many links to native plant societies and other related sites (including Sally's and my own).

Andy Wasowski is the editor of the New Mexico Native Plant Society's newsletter and, with his wife, Sally, the author of many fine books on native plant gardening, including Requiem for a Lawnmower. Andy and Sally have a Website at <http://www.botanicalmissionaries.com>.

Do you have a favourite source of native plant information on the Web? Send it to editor@nanps.org and we'll publish your tip in *The Blazing Star*. Or post your suggestion on the NANPS Website Message Board (www.nanps.org).

Directory of Sources and Services

Acorus Restoration

Southern Ontario Wildflowers, Grasses, Trees and Shrubs
May--Sept, Wed--Sun, 10--6; 4" pots \$2, 6" pots \$3; #722, 6th Con. Rd., Walsingham, Ontario, N0E 1X0; (519) 586-2603; fax: (519) 586-2447; info@ecologyart.com; www.ecologyart.com

Otter Valley Native Plants

Native Plants for naturalizing, restoration, and home gardens; meadow, prairie and woodland species, a limited selection of vines and shrubs. Contract growing, consultation and design. Gail Rhynard, Box 31, R.R. #1, Eden, Ont. N0J 1H0. Ph. 519-866-5639, fax: (519) 866-5640, e-mail: otter.va@kanservu.ca

Humber Nurseries Ltd.

"Growing Since 1948" We offer over 300 varieties of NATIVE Plants including trees, shrubs, vines, perennials, ferns, grasses, water and bog plants. Catalogue \$5.00. Tel: (416) 798-8733 or (905) 794-0555; e-mail: humber@humburnurseries.on.ca WebSite: www.humburnurseries.on.ca

Advertise your native plant nursery or natural landscaping service in this directory. Take advantage of our low introductory rates. Directory listing: (7 lines maximum): \$20.00/1 issue, \$30.00/2 issues. Display advertising: please enquire at editor@nanps.org. Advertising in *The Blazing Star* does not imply endorsement by the North American Native Plant Society.

Native plants are native to a specific place--buy within your bioregion.

New & Noted

Two recent reports from the Federation of Ontario Naturalists represent the high-quality research and useful data synthesis for which this organization is particularly well known:

* *The Alvars of Ontario: Significant Alvar Natural Areas in the Ontario Great Lakes Region*, by Vivian R. Brownell and John L. Riley, 2000, 270 pages, \$15 CDN, paperback. Available from Federation of Ontario Naturalists, 355 Lesmill Road, Don Mills, Ontario M3B 2W8; (416) 444-8419; info@ontarionature.org.

Current estimates suggest that at least three-quarters of the total area of alvars (naturally open areas of thin soil over flat limestone or marble rock) in the Great Lakes region are in Ontario. These unique "wild rock gardens" include species not known anywhere else on earth. As this report notes, "Most of the communities found within alvar landscapes are considered rare in Ontario and throughout their ranges; and over 100 rare, threatened and endangered plant and animal species are largely confined to the alvars." Ninety-two natural areas containing alvar in southern Ontario are documented in this report, with detailed summaries for 33 provincially and regionally significant sites. Of particular interest are the recommendations for the development of management plans and the protection of key alvar sites in Ontario. As the report concludes, "the best remaining alvars...deserve our best conservation efforts."

* *Woodland Heritage of Southern Ontario: A Study of Ecological Change, Distribution and Significance*, by Brendon M. Larson, John L. Riley, Elizabeth A. Snell and Helen G. Godschalk, 1999, 262 pages, \$15 CDN, paperback. See FON order information above.

Ontario's early settlers encountered a landscape dominated by mature forests of maple, beech, oak and pine. Today, 94% of the original upland forest cover has been lost to development, agriculture, urban sprawl and other uses. As this report demonstrates, the few remaining woodlands are small, fragmented and in need of protection: "Forest fragmentation is more dramatic in Ontario south and east of the Canadian Shield than in any region of comparable size in the Great Lakes basin." By summarizing the history and ecology of southern Ontario woodlands; documenting patterns of woodland loss and distribution across southern Ontario; and highlighting 35 significant heritage woodland sites in detail, this report serves as an important wake-up call for protecting our woodland legacy.

A report released in December 2000 by the

World Resources Institute warns that grassland ecosystems throughout the world have declined in their extent and condition, as well as in their ability to support human, plant and animal life. *Pilot Analysis of Global Ecosystems (PAGE): Grassland Ecosystems* concludes that North American prairies have declined by an average of 79% over the past century, and provides detailed statistics for tallgrass, mixed-grass and short-grass prairies in the Canadian provinces of Manitoba, Saskatchewan and Alberta, and the Midwestern United States. The report is available online at <http://www.wri.org/wri/wr2000>; copies may be ordered by mail from WRI Publications, P.O. Box 4852, Hampden Station, Baltimore, MD 21211, or by phone at 1-800-822-0504 (within the U.S.) or 410-516-6963.

Two books to recommend, both published by the consistently excellent Island Press (based in Washington, D.C.) and available in bookstores:

* *Alien Species in North America and Hawaii: Impacts on Natural Ecosystems*, by George Cox, 344 pages, 1999, ISBN 1-55963-680-7, \$30 U.S., paperback.

George Cox, emeritus professor of ecology at San Diego State University, provides a comprehensive overview and evaluation of exotic plant and animal invasions in the United States (the title says "North America" but there's little specifically Canadian information or resources). He describes the scope of the problem; dispersal patterns and how these vary for different regions and different terrestrial, freshwater and marine ecosystems; the effectiveness of current prevention and control efforts; along with theoretical issues and public policy implications. Includes an extensive source list.

* *Restoring Nature: Perspectives from the Social Sciences and Humanities*, edited by Paul H. Gobster and R. Bruce Hull, 269 pages, 2000, ISBN 1-55963-768-4, \$25 U.S., paperback.

Engagingly written and rigorously argued, this collection of essays asks all the hard questions about ecological restoration and explores them without flinching. Using a 1996 controversy over restoration efforts in a Chicago Forest Preserve as a touchstone for discussion (chopping down mature trees to restore a savanna/prairie ecosystem), this volume examines the philosophy of restoration, questions definitions of nature, and provides ample restoration case studies from projects across the United States. A must-read for anyone interested in ecological restoration.

Evergreen, a Canadian non-profit organization that supports naturalization of community spaces, schoolgrounds and homegrounds, recently published a comprehensive review of the literature pertaining to schoolground naturalization. *Nature Nurtures: Investigating the Potential of School Grounds* explores the range of benefits when a whole school community participates in improving its schoolgrounds by introducing natural elements such as meadows, woodlands and food-growing gardens. The report includes an historical overview of schoolground naturalization, a summary of key findings of various international studies on schoolground naturalization, an exhaustive examination of the benefits, with statistical and anecdotal evidence, and various Canadian case studies. *Nature Nurtures* is an important addition to the literature on schoolground naturalization and is available for \$15 (CDN)+tax from Evergreen, 355 Adelaide Street West, 5th floor, Toronto, Ontario M5V 1S2; (416) 596-1495; info@evergreen.ca; www.evergreen.ca.

Evergreen has also published a number of practical resources on naturalization:

* *Ground Work: Investigating the Need for Nature in the City*: an examination of the environmental, social and economic benefits that result from restoring healthy natural landscapes within the urban environment. \$15 +tax.

* *No Plot is Too Small: A Community's Guide to Restoring Public Landscapes*: a practical guide for planning a successful community naturalization project. \$15 +tax.

* *All Hands in the Dirt: A Guide to Designing and Creating Natural School Grounds*: covers the planning process, providing tips and templates for designing a naturalized schoolground. \$15 +tax.

- • • • •
- Coming up in the next issue of *The Blazing Star*:
- •
- * Another Yard for the Don: Profiles of gardens in the Don River Watershed, Toronto
- •
- * Sourcing restoration-quality native plants for ecological restoration projects
- •
- And much more!
- • • • •

NANPS on the Web: We're on line!
Check out our Website at
www.nanps.org.

Restoration Site

Expert Volunteers and Volunteer Experts: The Native Plant Stewardship Program

by Sasha Shaw

Sometimes big dreams come true. When the members of the Central Puget Sound Chapter of the Washington Native Plant Society (WNPS) first got together in Seattle to create a learning opportunity for volunteers, they planned well and thought big. The program soon expanded beyond the original goal of teaching WNPS members so they could in turn teach others about native plants. This basic goal is still the core of the program, but since the first class in 1996, the Native Plant Stewardship Program has grown to become a training program for volunteers from all sorts of organizations and community groups who are trying to improve their knowledge about the region's native plants and ecosystems.

The program could be called a matchmaking service for native plant enthusiasts, scientists, community groups and people who want to "do the right thing." It works because it connects volunteers who want to learn with scientists and experts who want to teach. Each year we are pleased to find that there are enough people with the ability and desire to volunteer their time to make the program successful. Indeed, there have always been many more applicants to the program than there are spaces available, and more people offering to teach than we can use.

The training curriculum has evolved as the goals of the applicants and the needs of society have changed. Wetland restoration has always been one focus of the training, but now there is also an increasing focus on upland forest restoration as citizens and the government look more at the whole watershed and the importance of forests for flood control and environmental quality. In addition, with the increasing attention on improving fish habitat, the program has attracted more people who are working on stream restoration. The program also interests gardeners who want to use native plants that are adapted to the local conditions. Native plant gardening has become increasingly popular in Seattle and the Puget Sound region, driven by the importance of using less water in the summer and the impact on water quality of fertilizers and pesticides often needed in conventional gardening. As the region becomes increasingly urbanized, native plant gardens also connect people to the natural environment that attracted them to this area originally.

Training is held each spring over ten

weeks and is fairly intensive, meeting one or two days a week and two or three weekend days. In addition to native plant identification, the training includes segments on local ecology, soils, restoration principles and methods, local regulations, native plant gardening, wildlife landscaping, ethnobotany and environmental education. In return for approximately 100 training hours, the participants agree to volunteer at least 100 hours as organizers, leaders or advisors on native plant education and restoration. The volunteer time does not have to benefit WNPS directly. In fact, we encourage program participants to take the knowledge they gain back to their own communities and organizations. In addition, we actively seek out community projects that might benefit from the technical support of a native plant steward. We especially look for projects in low-income, urban neighbourhoods that have the greatest need for assistance, and have encouraged native plant stewards to work on restoring degraded urban natural areas.

The program is supported financially by donations and grants. Granting agencies are impressed with the impact and value of the program. The benefit of training a native plant steward multiplies many times over as they teach others what they have learned and contribute their expertise on far-reaching

habitat restoration projects.

Since the first class in 1996, 95 people have completed the training. Some have worked with public schools on developing native plant gardens and an environmental curriculum. Others have organized neighbours to re-vegetate natural areas with native trees and understory plants or to restore degraded streambanks to improve fish habitat. Still other stewards have taught the public how to use native plants for water-wise and wildlife-friendly gardens.

Many different things have attracted people to the training class, but almost everyone is surprised by how much they learn from each other and from being volunteers. The native plant stewards find their lives are changed by what they learn and by the volunteering they do. The public's enthusiasm for learning about native plants and restoring native plant habitat is the driving force of the program and the reason why we continue to find ways to offer the training each spring.

Sasha Shaw is Program Coordinator of the Washington Native Plant Society.

For more information on the Native Plant Stewardship Program, including the dates of the next training session, phone (206) 527-3210 or e-mail npsp@wnps.org.

Native plant stewards learn about forest ecology from Forest Service botanist Laura Potash.



photograph courtesy Sasha Shaw

NANPS Seed Exchange

The Fall/Winter 2000 issue of *The Blazing Star* contains a full list of native plant species available from the NANPS Seed Exchange. The list can also be found on the NANPS Website: www.nanps.org. The following is a list of out-of-stock species, along with new species available.

Out of stock:

Grasses and grasslike plants: *Andropogon gerardii*, Bronte Creek PP; *Andropogon gerardii*, Port Hope; *Bouteloua curtipendula*; *Bouteloua gracilis*; *Scirpus atrovirens*, garden; *Stipa spartea*, Brantford Prairie.
Herbaceous plants: *Allium cernuum*, Port Hope; *Anemone virginiana*, Brantford; *Aralia racemosa*, garden; *Aster laevis*, Brantford Prairie; *Caulophyllum thalictroides*, garden; *Chimaphila umbellata*, nr. Parry Sound; *Cimicifuga racemosa*, garden; *Dodecatheon meadia*, York Region; *Geum triflorum*, garden; *Hydrophyllum virginianum*, garden; *Impatiens pallida*, Humber valley; *Silphium terebinthinaceum*, garden; *Smilacina racemosa*, Lake of Bays; *Solidago nemoralis*, garden; *Stylophorum diphyllum*, garden; *Thalictrum polygamum*, garden; *Triosteum auranticum*, Brantford Prairie area; *Uvularia grandiflora*, garden; *Vernonia altissima*, garden. **Woody plants:** *Acer saccharinum*, garden; *Asimina triloba*, garden; *Euonymus obovata*; *Halesia monticola*; *Hamamelis virginiana*, Brantford; *Hamamelis virginiana*, Burlington; *Lonicera canadensis*, garden; *Parthenocissus quinquefolia*, Toronto; *Prunus americana*; *Quercus macrocarpa*, garden; *Tilia americana*

<i>Geranium maculatum</i>	wild geranium	Waterloo Co., ON	as
<i>Helianthus divaricatus</i>	woodland sunflower	garden	volunteer jm
<i>Heliopsis helianthoides</i>	false sunflower	garden	mtk
<i>Hibiscus moscheutos</i>	swamp mallow	Lake Gibson, ON	gw
<i>Hibiscus sp.</i>	swamp rose mallow	garden	hm
<i>Liatris cylindracea</i>	cylindric blazing star	garden	mtk
<i>Liatris spicata</i>	spike blazing star	garden	rh
<i>Lilium canadense</i>	Canada lily	Trois Rivières	pf
<i>Lobelia cardinalis</i>	cardinal flower	garden	jm
<i>Lobelia cardinalis</i>	cardinal flower	Sauble Beach	source lvb
<i>Lobelia siphilitica</i>	great blue lobelia	garden	rh, lvb, jm
<i>Monarda fistulosa</i>	bee balm	Dundas, ON	cmc/tm
<i>Monarda fistulosa</i>	bee balm	Norfolk Co., ON	ff
<i>Phytolacca americana</i>	pokeweed	Waterford, ON	ff
<i>Silphium perfoliatum</i>	cup plant	garden	mtk
<i>Solidago caesia</i>	blue-stemmed goldenrod	garden	mtk
<i>Solidago flexicaulis</i>	zig-zag goldenrod	garden	mtk
<i>Solidago flexicaulis</i>	zig-zag goldenrod	Highland Creek	rh
<i>Solidago nemoralis</i>	grey stemmed goldenrod	garden	mtk
<i>Solidago rugosa</i>	rough-stemmed goldenrod	garden	mtk
<i>Thalictrum dasycarpum</i>	purple meadow-rue	Chatham MNR	cm
<i>Verbena hastata</i>	blue vervain	garden	mtk
<i>Verbena hastata</i>	blue vervain	near Kingston, ON	jm
<i>Zizia aurea</i>	golden Alexanders	garden	jf

WOODY PLANTS:

<i>Cercis canadensis</i>	redbud	garden	gc
<i>Ilex verticillata</i>	winterberry	Waterloo Co.	cmc/tm
<i>Viburnum lentago</i>	nannyberry	Waterloo Co.	cmc/tm
<i>Viburnum trilobum</i>	American high-bush cranberry	Waterloo Co.	cmc/tm

New donations:

species	common name	source	donor
FERNS:			
<i>Asplenium rhizophyllum</i>	walking fern	Inglis Falls, ON	cmc/tm
<i>Asplenium trichomanes</i>	maidenhair spleenwort	Inglis Falls, ON	cmc/tm
<i>Eriophorum [vaginatum?]</i>	tawny cotton grass	Wainfleet bog	gw
GRASSES AND GRASSLIKE PLANTS:			
<i>Hystrix patula</i>	bottlebrush grass	garden	mtk
<i>Panicum virgatum</i>	panic grass	garden	mtk
<i>Schizachyrium scoparium</i>	little bluestem	garden	mtk
HERBACEOUS PLANTS:			
<i>Actaea pachypoda</i>	white baneberry	Highland Creek	rh
<i>Actaea rubra</i>	red baneberry	Highland Creek	rh
<i>Anemone canadensis</i>	Canada anemone	garden	ff
<i>Anemone virginiana</i>	thimbleweed	Fenelon Falls, ON	cc
<i>Apocynum androsaemifolium</i>	spreading dogbane	Wainfleet bog	gw
<i>Aquilegia canadensis</i>	wild columbine	near Kingston, ON	jm
<i>Arisaema triphyllum</i>	jack-in-the-pulpit	Highland Creek	rh
<i>Asclepias incarnata</i>	swamp milkweed	garden	rh
<i>Asclepias tuberosa</i>	butterflyweed	garden	mh, GT
<i>Asclepias tuberosa</i>	butterflyweed	near Kingston, ON	jm
<i>Asclepias tuberosa</i>	butterflyweed	Waterloo Co., ON	as
<i>Aster laevis</i>	smooth aster	garden	mtk
<i>Aster macrophyllus</i>	big-leaved aster	garden	mtk
<i>Aster novae-angliae</i>	New England aster	garden	mtk
<i>Aster oolentangensis</i>	sky-blue aster	garden	gw, mtk
<i>Aster umbellatus</i>	panicled aster	garden	mtk
<i>Cassia obtusifolia</i>	sicklepod	Bronte Creek PP	tm
<i>Chelone glabra</i>	white turtlehead	garden	rh
<i>Echinacea pallida</i>	pale purple coneflower	garden	kd
<i>Echinacea purpurea</i>	purple coneflower	garden	jm, mtk
<i>Eupatorium perfoliatum</i>	boneset	Fenelon Falls, ON	cc
<i>Eupatorium rugosum</i>	white snake-root	garden	mtk
<i>Filipendula rubra</i>	Queen of the prairie	garden	jm
<i>Gentiana acaulis</i>		garden	jm
<i>Gentiana andrewsii</i>	bottle gentian	garden	jf, jm

New Donors:

as	Audrey Sauder
cc	Cathy Carter, Fenelon Falls, ON
cm	Cecil Morris, Milton, ON
ds	Daryl Sheppard, Brighton, ON
ff	Felicity Fowke, Toronto, ON
gc	Grif Cunningham, Toronto, ON
gw	Gerry Winger, Sherkston, ON
hm	Howard Meadd, Scarborough, ON
jm	Jane Murphy, Kingston, ON
kd	Kathleen Durant, Grimsby, ON
lvb	Lloyd V. Busch, Guelph, ON
mtk	Monique ten Kortenaar, Guelph, ON
pf	Philip Fry, Oxford Station, ON
rh2	Rolf Hertling, Toronto, ON

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history!

Please inquire about specials for school and community naturalization projects. We have an abundant supply of certain species.

Future donors, please think about our 'out of stock' list and consider making a point of collecting these species this year. While we are always interested in species new to the exchange, we can particularly use more sedges and grasses and more woodland perennials. Shrubs have been extremely popular, and would be very welcome. We are also chronically short of species that produce seed early in the year. So, make a point of checking your hepaticas, wild ginger, wild geraniums, etc., in the spring and early summer, and collecting seed for the exchange.

Please send requests, queries and donations to: NANPS, Seed Exchange, P.O. Box 84, Station D, Etobicoke, Ontario, M9A 4X1. Please send \$1 for the first packet of seeds and 50 cents for each additional packet. Members may request up to ten packets at a time, 15 if they have donated seed within the past year. It makes our job a lot easier if you list species by botanical name, in alphabetical order. List plenty of substitutes in order of preference. (This gives us a chance to be generous.)