The Blazing Star

Winter 2002, Volume 3, Issue 1

Newsletter of the North American Native Plant Society

Native Plant to Know

Goldthread

Coptis trifolia ssp. *groenlandica*

Family: *Ranunculaceae* (Crowfoot or Buttercup)

by Janice Stiefel

OTHER NAMES: Yellowroot, Canker-Root, Vegetable Gold, Coptis, Mouth-Root, Dye Root, Yaller Root, Golden-Seal

RANGE: Circumboreal; Alaska south to British Columbia, Iowa and New Jersey to North Carolina

HABITAT: Damp, mossy woods and bogs.

DESCRIPTION: Solitary white flowers and lustrous, evergreen basal leaves rise from a thread-like, yellow underground stem. The flowers are 1/2-inch (1-cm) wide with 5 to 7 white, petal-like sepals and very small club-like petals. There are numerous stamens and several pistils. The leaves are 1 to 2 inches (2.5 to 5 cm) wide, all basal, palmately divided into 3 leaflets with scalloped, toothed margins. The fruit is a dry pod, splitting open along one side. Height: 3 to 6 inches (7 to 15 cm). Flowering: May to July.

COMMENTS: Although its flowers are small, patches of glistening, evergreen leaves catch your eyes. In 1807, it is recorded that American Indians stained their porcupine quills and feathers with a yellow dye made from the roots. Canadian Indians used the roots and leaves to dye skins, wool and flax yellow. As late as 1908, the roots brought a relatively high price.

MEDICINAL USE: Indians and colonists chewed the underground stem to treat canker sores and mouths irritated by smoking too much tobacco. It was made into a tea for use as an eyewash. A decoction made in conjunction with Goldenseal (*Hydrastis canadensis*) has been found to destroy the appetite for intoxicating liquors. In New England, it was valued as a local application for thrush in children. Recordings from 1785 report that the roots were frequently used as ingredients in gargles for sore throats.

A 1945 French Canadian source says, *"The boiled roots are used for serious colds and respiratory troubles. A linen is soaked in a tea of the plant and applied to the eyes. The Canadians, without doubt, borrowed the knowledge of this plant from the Indians."*

PHOTOGRAPH COURTESY JANICE STIEFEL

Goldthread (*Coptis trifolia* ssp. *groenlandica*)

Name Origin: The genus name, *Coptis,* is from the Greek word, *coptein*, meaning "to cut," alluding to the divided leaves. The species name, *trifolia*, means "three-leaved or three leaflets." The second species name, *groenlandica*, means "of Greenland."

The common name refers to the bright yellow, thread-like rhizomes (underground stems). Many tribes of Indians used the root as a remedy for sore or ulcerated mouths, hence one of the plant's other names – Canker-Root.

Continued on page 12

***THE BLAZING STAR* IS...**

The Blazing Star is published quarterly (April, August, November, February) by the North American Native Plant Society. Contact editor@nanps.org for editorial deadlines and for advertising rates. The views expressed herein are those of the authors and not necessarily those of NANPS.

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

Winter 2002
Volume 3, Issue 1

Editor: Lorraine Johnson
Production: Linda Gustafson

North American Native Plant Society, formerly Canadian Wildflower Society, is a registered charitable society, no. 130720824. Donations to the society are tax deductible in Canada.

NANPS Membership: CAN$10/year within Canada, US$10 year outside Canada

Please make cheques and money orders payable to North American Native Plant Society and mail to P.O. Box 84, Station D, Etobicoke, Ontario M9A 4X1. Telephone: (416) 631-4438. E-mail: nanps@nanps.org. Web: www.nanps.org.

Meet the NANPS Board of Directors

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

Douglas Counter is a self-employed graphic designer whose work has helped promote local and national environmental organizations. He sits on the board of his local chapter of TD Canada Trust Friends of the Environment Foundation and is working with the Toronto Environmental Alliance to restrict pesticide use in Toronto. He lovingly tends his tallgrass prairie habitat garden in suburban Toronto, Ontario.

Catherine Crockett is a reformed computer nerd who now operates Taddle Creek Nursery and propagates ferns in the Annex neighbourhood of Toronto, Ontario. 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 environment and waste management. She is currently working with Toronto-area schools on naturalization projects.

Grif Cunningham is a retired professor of social science at York University in Toronto, Ontario.

Scott Guthrie is an educator with the Peel District School Board in Ontario. He has been active in a schoolground naturalization project at a Brampton, Ontario, school for the past eight years.

Lorraine Johnson is the author of seven books, including *100 Easy-to-Grow Native Plants* and *The New Ontario Naturalized Garden*. Her new book, *Tending the Earth: A Gardener's Manifesto*, will be published by Penguin Books this spring.

Bill Kilburn is a graduate student in the Department of Zoology at the University of Toronto/Royal Ontario Museum, where his current research is focused on the study of evolution. Bill traces his interest in native plant gardening to his background in field botany, including work at the U of T, Toronto Zoo and University of Guelph Herbarium, and many hours hunched over unknown plants with his good friend Newcomb.

Suzanne Lew has her own organizing business. She enjoys her spare time in her East York, Ontario, garden and is a graduate of Humber College's Landscape Program.

Daisy Moore is a garden designer and radio broadcaster who hosts a gardening program on CHMI (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 is a harmless eccentric who lives in Toronto, Ontario. She inspires terror in those of her neighbours who believe that the key to a nice neighbourhood (and high property values) lies in regular application of lawn chemicals. She likes evergreen woodland sedges.

Jackie Ramo is a garden design consultant and a painter. Her garden has twice won a Best Garden Award in the East York Mayor's Blooming Contest. She volunteers at a mixed seniors residence, where she is chair of both the Indoor and Outdoor Plants Committees.

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.

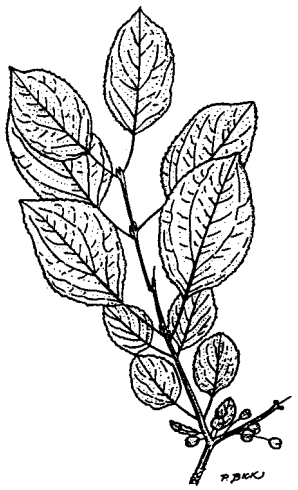
Richard Woolger's current interest is growing native ferns from spores, which, he points out, "requires a lot of patience (and failures)." He is also interested in propagating Carolinian trees and shrubs from seed.

If you are interested in volunteering your time for NANPS, please contact us at (416) 631-4438. 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).

Member's Questions

"How can I get rid of buckthorn? This invasive, non-native shrub is taking over the understory of my woodland."
– a member in the Northeast

We asked Christy Johnson, a NANPS member who lives in Williston, Vermont, where she battles buckthorn on her 1.3-acre property, to respond:



Drawing by Phyllis Bick, courtesy Missouri Department of Conservation

Common buckthorn (*Rhamnus cathartica*)

The good news is that you only have an understory problem at this point. I know of someone who has a three-acre monoculture of buckthorn; this invasive species is much harder to control in open areas. In your case, you should be able to retard the buckthorn invasion while desirable trees and understory shrubs become viable. The key element in tackling buckthorn is persistence because there doesn't appear to be a permanent eradication method.

These shrubs or small trees are diabolical survivors. First, they have no native predators or diseases here in North America to regulate their spread. (They hail from Europe.) They leaf out earlier than native plants and retain their leaves longer; their headstart on natives allows them to shade out potential competitors that might germinate if light could reach the native seeds. Buckthorn trees have beautiful dark berries, which birds devour, but the berries also act as laxatives, so they provide minimal nutrition but guarantee widespread seed dispersal. Hordes of uneaten berries fall around the original tree; I stopped counting when I pulled a thousand young seedlings in one area. The abundant berries also float, so they can quickly invade wetland areas; thus, buckthorn trees with berries near water should be particular targets for removal. By the way, don't assume that a tree without berries will never have any, because buckthorns can wait fifty years in the shade for the canopy to open before they set seed. Yet another problem with buckthorn is that it alters its localized environment (i.e., moisture, humidity, temperature) sufficiently to destroy the habitat for many small creatures including mice, voles and snakes. [1]

So what are your removal options? You'll want to learn to recognize the cotelydons, or first two leaves to sprout, so that you can hand-pull them while they are tiny. For saplings and seedlings, you can wait until the ground is soft after a rain and then uproot the entire shrub. For those plants you cannot pull out by hand, the best tool I've found is a Weed Wrench from New Tribe [2] because the tool's long arm gives you significant leverage.

There are two problems with uprooting buckthorns. First, if you leave enough root material the plant will resprout; as well, the disturbed earth may become an open germination site for those abundant berries. Thus far, neither of these has been a significant problem for me, perhaps because the understory in my woodland is shaded and the ground is blanketed with pine needles. However, another problem is that uprooted buckthorns left with their roots pointing skyward reverse direction and begin growing again toward the light; thus, you should either burn uprooted buckthorn or else dessicate them by hanging them or leaving them on a large rock.

Another option is to cut them down. However, a cut buckthorn's vigorous regrowth is aptly described as a "Medusa-like tangle of new stems."[3] They can produce berries and seed the first year of regrowth. Persistence is required and you must repeatedly cut back multiple branches on the constantly sprouting stump. This can be a discouraging struggle; so far, I've only managed to slow their growth rather than kill them with this method.

The other option with cutting is to immediately brush the freshly cut stump with a herbicide such as RoundUp. Many sources recommend doing this in the late fall when other species are dormant and will not be affected by the herbicide; others recommend doing it just after the buckthorn has expended significant energy leafing out in the spring.

Another option is to girdle the tree. I am attempting this now and cannot yet assess its effectiveness, but I've read that this method is more effective when the girdled area is brushed with herbicide.

Notes

[1] "Invaders," Conservation Notes of the New England Wild Flower Society, Vol. 2, No. 3, 1998, p. 15–16.
[2] New Tribe, c/o Tom Ness and Sophia Sparks, 5517 Riverbanks Road, Grants Pass, Oregon 97527; telephone (541) 476-9492 or see the website at www.canonbal.org/weed.html or tncweeds.ucdavis.edu/tools/wrench.html.
[3] "Invaders," op cit.

NANPS News

NANPS is looking for a volunteer to translate our "info sheets" into French and Spanish. If you are willing to help with translation in either of these languages, please phone (416) 631-4438 or e-mail nanps@nanps.org.

Wildflower Farm, a native plant nursery and pick-your-own flower farm in Schomberg, Ontario, is offering NANPS members a 10 percent discount on all plants and seeds, a 10 percent discount on seminars, and a group discount of 10 percent for tours of Wildflower Farm. For more information, see www.wildflowerfarm.com or call toll free 866-GRO WILD.

Many thanks to the following people who have taken out Sustaining Memberships in NANPS: Jane Murphy and Jim Hodgins.

Directory of Sources and Services

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 otterva@kanservu.ca

Planting a Prairie in Barrie, Ontario

PHOTOGRAPH COURTESY PEGGY WONG

Volunteers Joanne Hards and Gwen Petreman layer newspapers and leaves to make the "lasagna garden base."

by Peggy Wong

One Friday afternoon several years ago, Barrie Arboretum staff ran out of time to cut the grass in a small valley at the back of the site. A quick decision was made to mow a broad pathway down the centre of the valley, following the lay of the land, and get back to it on Monday. As it turned out, though, the pathway through the long grass looked so inviting that we decided it should became a permanent feature of the Arboretum, and the valley was christened "The Meadow."

The meadow was left relatively undisturbed for two seasons. In the absence of mowing, the land was carpeted with grasses and flowering plants: dandelion, yarrow, hawkweed, plantain, goatsbeard, prunella, Queen Anne's lace, strawberries and thistles. The diversity of insects, butterflies and birds increased dramatically. The meadow hummed! Even our human visitors grew accustomed to the new "habitat." We felt it was a success… But was it?

Last fall, we looked more closely at the plants growing in the meadow and were disappointed by the lack of diversity. Moreover, with the exception of one goldenrod clump and some of the grasses, there were no native plants. The meadow was comprised of plants descended from seeds brought by the early European settlers.

Interested Barrie Horticultural Society (BHS) members formed a working committee to look at ways to introduce native plants to the meadow and research began. We learned that, historically, the southern Ontario tallgrass prairie/savanna plant communities extended north into our county and that in the mid-1980s, an inventory of remnant tallgrass prairie plants had been prepared for the Ardagh Bluffs, several miles south of the Arboretum. We realized that it would be challenging, but not impossible, to obtain indigenous plants for our project.

PHOTOGRAPH COURTESY JOY SWEEZIE

Tall sunflower (*Helianthus giganteus*)

Starting the meadow had been easy, as all it involved was not cutting the grass. But introducing native tallgrass prairie plants was another thing. Our BHS volunteers and staff were already stretched to the limit, so we started small with an area 3 metres by 6 metres (10 ft by 20 ft) and a budget of under $200.

We made lists of desirable plants, based on the Ardagh Bluffs report and *Planting the Seed: A Guide to Establishing Prairie and Meadow Communities in Southern Ontario*, published by Environment Canada. Then we went shopping at the NANPS spring plant sale and had no trouble at all spending our allocated funds. Although we couldn't get everything, our planting list included: big bluestem (*Andropogon gerardii*), New England aster (*Aster novae-angliae*), sky blue aster (*Aster oolentangiensis*), tall sunflower (*Helianthus giganteus*), common evening primrose (*Oenothera biennis*), wild bergamot (*Monarda fistulosa*), grey-headed coneflower (*Ratibida pinnata*), little bluestem (*Schizachyrium scoparium*), stiff goldenrod (*Solidago rigida*) and Indian grass (*Sorghastrum nutans*).

Planting the prairie plants within the meadow was a challenge because major digging was not an option. (Our working committee consisted of three middle-aged women and one expectant mother.) So we used the "lasagna garden" technique, and it worked like a dream. The day before planting, the Arboretum staff cut down the meadow plants in the prairie site using a whipper snipper, and set out piles of compost, grass clippings and mulched leaves. On Saturday morning we arrived with a wagonload of newspapers. We covered the prairie site with a 2-cm (3/4-inch) layer of newspapers, soaked thoroughly. Then we applied the organics in layers: 8 cm (3 inches) of compost, 2 cm (3/4 inch) of grass clippings and 8 cm (3 inches) of mulched leaves, watering well between layers. We repeated the organic layers and the watering, and planted the prairie plants directly into a deep bed of moist compost. Total time – three hours!

We didn't have any funds in our very small budget for a cover crop to keep the weeds down. To our delight, though, we received a

PHOTOGRAPH COURTESY MIKE DUNK

The Barrie Arboretum meadow

phone call from a BHS member who wondered if the Arboretum could use three flats of Canada wild rye (*Elymus canadensis*), the perfect cover crop.

Despite the mid-summer drought, the baby prairie was watered only once during its first season. Weeding was hardly an issue: the newspapers kept weeds from growing through, and stray seedlings were hand-pulled. Occasional edging with a sharp spade kept the yarrow, plantain and strawberries from encroaching around the edges.

Our tallgrass prairie project, initiated by a staff shortcut, has given BHS the opportunity to reintroduce indigenous flora to the Barrie Arboretum. We are making plans for expansion next summer using locally sourced plants and seeds, with guidance from Ministry of Natural Resources specialists. As the prairie gathers its own momentum, we hope that it will provide habitat for insect, bird and mammal species and demonstrate our unique tallgrass prairie heritage.

Peggy Wong is a Director of the Barrie Horticultural Society. As a volunteer, she coordinates the Barrie Arboretum, a joint project of the BHS and City of Barrie. The Barrie Arboretum is located within Sunnidale Park at the corner of Sunnidale Road and Cundles Road in northwest Barrie, Ontario.

NANPS Seed Exchange

The following native species are available to members through the NANPS Seed Exchange. (Members can order seeds without having donated seeds to the Seed Exchange.) See page 10 for ordering details and key to donors.

	species	common name	donor	location
Ferns				
	Adiantum pedatum	maidenhair fern	tm/cmc	Crawford Lake, ON
	Asplenium trichomanes	maidenhair spleenwort	tm/cmc	Crawford Lake, ON
	Camptosorus rhizophyllus	walking fern	tm/cmc	Crawford Lake, ON
	Matteuccia struthiopteris	ostrich fern	tm/cmc	Humber river valley, ON
	Onoclea sensibilis	sensitive fern	tm/cmc	Bruce Co., ON
	Phyllitis scolopendrium var. *americanum*	hart's tongue fern	tm/cmc	Bruce Co., ON
	Polypodium vulgare	polypody	tm/cmc	Crawford Lake, ON
	Polystichum acrostichoides	Christmas fern	jf	Stoney Lake, ON
Grasses				
	Andropogon scoparius	little bluestem	jf	garden
	Bouteloua curtipendula	side-oats grama	jf, jlh, mtk, tm, wb	garden
	Bromus kalmii	prairie brome	mtk	garden
	Carex grayii	mace sedge	mp, tm	garden
	Carex vulpinoides	fox sedge	tm/cmc	Dundas, ON
	Elymus riparius	riverbank rye	tm	garden
	Elymus scoparia	riverbank rye	tm/cmc	Humber river valley, ON
	Hierochloe odorata	sweetgrass	mp	garden
	Hystrix patula	bottlebrush grass	lj, mtk	garden
	Juncus tenuis	path rush	tm/cmc	Dundas, ON
	Panicum sp. [prob. *acuminatum*]	panic grass [prob. hairy]	tm/cmc	Bruce Co., ON
	Panicum virgatum	switch grass	mtk	garden
	Schizachyrium scoparium	little bluestem	tm/cmc	Bruce Co., ON
	Schizachyrium scoparium	little bluestem	lj	nr Pinery PP, ON
	Schizachyrium scoparium	little bluestem	wb	wild source—North Dumfries, Waterloo Co., ON
	Schizachyrium scoparium	little bluestem	mtk	garden
	Sorghastrum nutans	Indian grass	wb	wild source—North Dumfries, Waterloo Co., ON
	Typha angustifolia	slender cattail	tm/cmc	Dundas, ON
Herbaceous				
	Actaea pachypoda	white baneberry	rh	Highland Creek Watershed, ON
	Actaea pachypoda	white baneberry	tm/cmc	Dundas, ON
	Actaea rubra	red baneberry	rh	Highland Creek Watershed, ON
	Actinomeris alternifolia	wingstem	tm	garden
	Agastache nepetoides	yellow giant hyssop	mtk	garden
	Allium cernuum	nodding wild onion	cc, jlh, lr, rh	garden
	Allium tricoccum	wild leek	tm/cmc	Bruce Co., ON
	Allium tricoccum	wild leek	rw	
	Amsonia tabernaemontana	blue star	tm	garden
	Anemone canadensis	Canada anemone	Jd	Deep River, ON
	Anemone patens	pasqueflower	mtk	garden
	Anemone virginiana	thimbleweed	Tm/cmc	Halton Falls, ON
	Antennaria plantaginifolia	pussytoes	Tm	garden
	Apocynum sibiricum	clasping-leaved dogbane	Hm	Scarborough, ON
	Aquilegia canadensis	wild columbine	Jd	Deep River, ON
	Aquilegia canadensis	wild columbine	mtk	garden
	Arisaema triphyllum	jack in the pulpit	Tm/cmc	Crawford Lake, ON
	Arisaema triphyllum	jack in the pulpit	Rh	Highland Creek Watershed
	Arisaema triphyllum	jack in the pulpit	Ff	Norfolk Co., ON
	Arisaema triphyllum	jack in the pulpit	Tm/cmc	Dundas, ON
	Arisaema triphyllum	jack in the pulpit	Cp, jm	
	Asclepias incarnata	swamp milkweed	Cc	Fenelon Falls, ON
	Asclepias syriaca	common milkweed	Jd	Deep River, ON
	Asclepias syriaca	common milkweed	Rh	Highland Creek Watershed, ON
	Asclepias tuberosa	butterfly milkweed	mp, mtk, tm	garden
	Asclepias tuberosa	butterfly milkweed	mtk	Hanlon Creek Park, Guelph, ON
	Aster divaricatus	white wood aster	Sh	Upper Peninsula, MI

species	common name	donor	location
HERBACEOUS, *continued*			
Aster dumosus	bushy aster	Sh	Upper Peninsula, MI
Aster laevis	smooth aster	Sh	Upper Peninsula, MI
Aster laevis	smooth aster	Cc, mtk	garden
Aster lateriflorus	calico aster	Sh	Upper Peninsula, MI
Aster linariifolius	stiff aster	Sh	Upper Peninsula, MI
Aster lowrieanus	Lowrie's aster	Hm	Beaverton, ON
Aster macrophyllus	big leaf aster	Sh	Upper Peninsula, MI
Aster macrophyllus	large-leaved aster	mtk	garden
Aster novae-angliae	New England aster	Lj, mtk	garden
Aster novi-belgii	New York aster	Sh	Upper Peninsula, MI
Aster oolentangensis	sky blue aster	mtk	garden
Aster puniceus	swamp aster	Tm	garden
Aster sp.	a white northern aster	Tm	garden
Aster umbellatus	flat-topped white aster	Sh	Upper Peninsula, MI
Aster umbellatus	flat-topped white aster	mtk	garden
Aster undulatus	wavy-leaved aster	sh	Upper Peninsula, MI
Aster urophyllus	arrow-leaved aster	wb	garden
Astragalus canadensis	Canadian milk vetch	lr	garden
Baptisia australis	wild false indigo	jm, tm	garden
Bidens cernua	nodding bur marigold	sh	Upper Peninsula, MI
Cacalia plantaginea [tentative]	tuberous Indian plantain	tm/cmc	Bruce Co., ON
Campanula rotundifolia	harebell	mtk	garden
Caulophyllum thalictroides	blue cohosh	tm/cmc	Crawford Lake, ON
Chelone glabra	white turtlehead	nm	garden
Chrysopsis camporum	prairie golden aster	sh	Upper Peninsula, MI
Cimicifuga racemosa	black snakeroot	lj	garden
Circaea quadrisulcata	enchanter's nightshade	tm/cmc	Dundas, ON, Crawford Lake, ON
Coreopsis major	greater coreopsis	sh	Chicago, IL
Coreopsis tripteris	tall coreopsis	jf	garden
Corydalis sempervirens	rock harlequin	jd	Deep River, ON
Corydalis sempervirens	rock harlequin	mtk	garden
Datura stramonium	jimsonweed	jlh	garden
Desmodium canadense	showy tick trefoil	lr, mtk	garden
Desmodium paniculatum	panicled tick trefoil	wb	Haldimand-Norfolk, ON
Echinacea pallida	pale purple coneflower	lr	garden
Echinacea purpurea	purple coneflower	jd, lr, mtk, nm, rh	garden
Echinocystis lobata	wild cucumber vine	tm	Humber valley, ON
Echinocystis lobata	wild cucumber vine	tm/cmc	Dundas, ON
Epilobium angustifolium	fireweed	sh	Upper Peninsula, MI
Eryngium yuccifolium	rattlesnake master	lr	garden
Eupatorium maculatum	spotted Joe-pye weed	sh	Upper Peninsula, MI
Eupatorium maculatum	spotted Joe-pye weed	lr	garden
Eupatorium perfoliatum	boneset	tm/cmc	Dundas, ON
Eupatorium rugosum	white snakeroot	mtk	garden
Gaillardia aristata	blanket flower	jlh	garden
Gentiana andrewsii	bottle gentian	jf, jlh, jm, lr, mp	garden
Geum aleppicum var. *strictum*	yellow avens	jm	Kingston, ON
Geum macrophyllum	large-leaved avens	mtk	garden
Helenium autumnale	sneezeweed	jlh	garden
Helianthus tuberosus	Jerusalem artichoke	jlh	garden
Helianthus tuberosus [tubers]	Jerusalem artichoke	jlh	garden
Heliopsis helianthoides	ox-eye sunflower	mtk	garden
Hibiscus palustris	swamp rose-mallow	hm	Kingsville, ON
Hieracium venosum	rattlesnake weed	jlh	garden
Hypericum ascyron	great St. John's wort	tm/cmc	Humber river valley, ON
Hypericum ascyron	great St. John's wort	jlh, mp	garden
Impatiens pallida	pale touch-me-not	lr	garden
Impatiens pallida	pale jewelweed	tm/cmc	Dundas, ON
Ipomoea hederacea	ivy-leaved morning glory	sh	Chicago, IL
Ipomoea pandurata	manroot	jlh	garden
Lespedeza virginica	slender bush clover	sh	Upper Peninsula, MI
Liatris cylindracea	cylindric blazing star	wb	garden
Liatris spicata	spiked blazing star	rh	garden
Lilium michiganense	Michigan lily	wb	wild source — Wilmot Twp

species	common name	donor	location
Herbaceous, *continued*			
Lobelia cardinalis	cardinal flower	lr	garden
Lobelia siphilitica	great blue lobelia	jm	garden
Monarda fistulosa	bee balm	ff	Norfolk Co., ON
Monarda fistulosa	bee balm	nm	Toronto, ON
Monarda punctata	horsemint	nm	garden
Oenothera biennis	evening primrose	jm	nr. Kingston, ON
Oenothera missouriensis	Missouri primrose	jf	garden
Oxalis montana	common wood sorrel	sh	Upper Peninsula, MI
Parnassia glauca	grass of parnassus	vb	Manitoulin Isl., ON
Penstemon digitalis	foxglove beardtongue	jf, lr	garden
Penstemon digitalis	foxglove beardtongue	nm	Toronto, ON
Penstemon hirsutus	hairy beardtongue	tm	garden
Penstemon hirsutus	hairy beardtongue	nm	Toronto, ON
Penstemon smallii	Small's penstemon	jf	garden
Petalostemum purpureum	purple prairie clover	lr	garden
Phryma leptostachya	lopseed	tm/cmc	Dundas, ON
Phytolacca americana	pokeweed	mp	garden
Pycnanthemum virginianum	Virginia mountain mint	lr, nm	garden
Ratibida columnifera	yellow Mexican hat	lr	garden
Ratibida pinnata	grey-headed coneflower	jd, mtk, nm	garden
Rudbeckia laciniata	green-headed coneflower	jlh	garden
Rudbeckia hirta	black-eyed Susan	sh	Upper Peninsula, MI
Rudbeckia hirta	black-eyed Susan	mtk	garden
Rudbeckia hirta	black-eyed Susan	nm	Toronto, ON
Rudbeckia laciniata	green-headed coneflower	lr	garden
Rudbeckia maxima		lr	garden
Rudbeckia subtomentosa	sweet black-eyed Susan	lr	garden
Rudbeckia triloba	thin-leaved coneflower	jd	Deep River, ON
Sanguinaria candensis	bloodroot	mtk	garden
Sanicula canadensis	black sanicle	tm/cmc	Crawford Lake, ON
Sarracenia purpurea	pitcher plant	tm/cmc	Bruce Co., ON
Sarracenia purpurea	pitcher plant	vb	Manitoulin Isl., ON
Senna marilandica	Maryland senna	wb	garden
Silphium laciniatum	compass plant	wb	Elgin Co., ON
Silphium laciniatum	compass plant	jf	garden
Silphium perfoliatum	cup plant	cc, mp, mtk	garden
Silphium terebinthinaceum	prairie dock	jf, mp	garden
Sisyrinchium angustifolium	pointed blue-eyed grass	cc	garden
Sisyrinchium sp.	blue-eyed grass	rh	Scarborough, ON
Smilacina racemosa	false Solomon's seal	ff	Norfolk Co., ON
Smilacina racemosa	false Solomon's seal	tm/cmc	Dundas, ON
Smilacina racemosa	false Solomon's seal	rw	
Smilax herbacea	carrion vine	tm/cmc	Dundas, ON
Solidago altissima	tall goldenrod	sh	Upper Peninsula, MI
Solidago caesia	blue-stemmed goldenrod	mtk	garden
Solidago caesia	blue-stemmed goldenrod	rh	Highland Creek Watershed
Solidago flexicaulis	zig-zag goldenrod	lj, mtk	garden
Solidago flexicaulis	zig-zag goldenrod	nm	Toronto, ON
Solidago juncea	early goldenrod	wb	wild source — North Dumfries, Waterloo Co., ON
Solidago patula	goldenrod	wb	wild source — Wilmot Twp, ON
Solidago ptarmicoides	upland white goldenrod	lr	garden
Solidago puberula	downy goldenrod	hm	Torrance, ON
Solidago rigida	hard-leaved goldenrod	mtk	garden
Solidago rugosa	rough-stemmed goldenrod	mtk	garden
Solidago rugosa	rough-stemmed goldenrod	wb	wild source—Haliburton, ON
Solidago speciosa	showy goldenrod	mtk	garden
Solidago tenuifolia	slender fragrant goldenrod	sh	Upper Peninsula, MI
Stylophorum diphyllum	wood poppy	mtk, rh, rw	garden
Symplocarpus foetidus	skunk cabbage	tm/cmc	Dundas, ON
Thalictrum polygamum	tall meadow-rue	jm	garden
Thalictrum polygamum	tall meadow-rue	tm/cmc	Humber river valley, ON
Thermopsis carolina	Carolina lupin	tm	garden
Uvularia sp.	bellwort sp.	jm	wild origin
Verbena hastata	blue vervain	sh	Upper Peninsula, MI

species	common name	donor	location
HERBACEOUS, *continued*			
Verbena hastata	blue vervain	cc	Fenelon Falls, ON
Verbena hastata	blue vervain	lr, mtk	garden
Verbena hastata	blue vervain	jm	nr. Kingston, ON
Verbena stricta	hoary vervain	mtk	garden
Verbena stricta	hoary vervain	wb	Middlesex Co., ON
Verbena urticifolia	white vervain	tm/cmc	Dundas, ON
Vernonia noveboracensis	New York ironweed	jf, lr	garden
Vernonia sp.	ironweed	tm	garden
Veronicastrum virginicum	culver's root	nm	garden
Zizia aurea	golden alexanders	jf, mtk, nm	garden
WOODY			
Acer negundo	Manitoba maple	jlh	garden
Arctostaphylos uva-ursi	bearberry	tm/cmc	Bruce Co., ON
Asimina triloba	pawpaw	js	garden
Calycantha florida	Carolina allspice	tm	garden
Celastrus scandens	bittersweet	jlh	Erin, ON
Celastrus scandens	bittersweet	jf	garden
Celtis tenuifolia	dwarf hackberry	wb	Port Franks, ON
Cercis canadensis	redbud	jc, jlh	garden
Clematis virginiana	virgin's bower	tm/cmc	Humber river valley, ON
Cornus florida	flowering dogwood	tm/cmc	garden
Cornus obliqua	silky dogwood	tm/cmc	Humber river valley, ON
Cornus racemosa	grey dogwood	tm/cmc	Dundas, ON
Corylus americana	American hazel	wb	Middlesex Co., ON
Diervilla lonicera	bush honeysuckle	tm/cmc	Dundas, ON
Diospyros virginiana	persimmon	js	garden
Euonymus obovatus	running strawberry	tm/cmc	Crawford Lake, ON
Euonymus obovatus	running strawberry	wb	wild source — Wilmot Twp, ON
Hamamelis virginiana	witch hazel	tm/cmc	Dundas, ON
Ilex laevigata	winterberry	wb	wild source — Wilmot Twp, ON
Juglans cinerea	butternut	jlh	garden
Juglans nigra	black walnut	hs	garden
Juniperus horizontalis	prostrate juniper	tm/cmc	Bruce Co., ON
Juniperus virginiana	wild juniper	jlh	Garden
Larix laricina	tamarack	tm/cmc	Bruce Co., ON
Lindera benzoin	spicebush	wb	Haldimand-Norfolk, ON
Liriodendron tulipifera	tulip tree	jlh	Niagara-on-the-lake, ON
Myrica gale	sweet gale	tm/cmc	Bruce Co., ON
Potentilla fruticosa	shrubby potentilla	tm/cmc	Bruce Co., ON
Prunus virginiana	chokecherry	tm/cmc	Caledon, ON
Quercus sp.	oak sp.	tm/cmc	Dundas, ON
Rhus aromatica	fragrant sumac	tm/cmc	Garden
Rosa blanda	smooth wild rose	tm/cmc	Bruce Co., ON
Rubus odoratus	flowering raspberry	ff	Garden
Rubus odoratus	flowering raspberry	rh	Highland Creek Watershed
Rubus odoratus	flowering raspberry	tm/cmc	Dundas, ON
Sambucus canadensis	black elderberry	tm/cmc	Dundas, ON
Staphylea trifolia	bladdernut	tm/cmc	Crawford Lake, ON
Thuja occidentalis	eastern white cedar	tm/cmc	Bruce Co., ON
Viburnum acerifolium	maple-leaved viburnum	tm	Bronte or Elgin?, ON
Viburnum lentago	nannyberry	tm/cmc	Halton Falls, ON
Viburnum lentago	nannyberry	tm/cmc	Humber river valley, ON
Viburnum lentago	nannyberry	wb	Waterloo Co., ON
Viburnum trilobum	highbush cranberry	wb	Waterloo Co., ON
Yucca filamentosa	bear-grass	jlh	garden
Zanthoxylum americanum	prickly ash	tm/cmc	Dundas, ON

See next page for details on ordering seeds from the NANPS Seed Exchange.

Seed Exchange Donors

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Ordering from the NANPS Seed Exchange

Please include the following information with your request for seeds: your name and mailing address, the species you'd like (in alphabetical order by botanical name) and any substitutes you'd like, in case we are out of a particular species (list substitutes in order of preference and, remember, the more you list, the more opportunity we have to be generous). If you'd prefer seed from a wild source rather than a garden source, please note that with your order – we'll endeavour to accommodate your request, though in some cases our supply of wild seed is limited.

You may request up to 15 packets, 30 if you donated seed or spores to the Seed Exchange this year. Include $1 for the first packet and 50 cents for each additional packet – Canadian funds in Canada, U.S. for U.S. requests to cover higher postage costs. If you are using the seed for a naturalization project, or for educational or scientific purposes, we'd love to hear about it.

Send your request to NANPS – Seed Exchange, P.O. Box 84, Station D, Etobicoke, Ontario M9A 4X1. Inquiries can also be made by e-mail: seeds@nanps.org.

Note: We list the seeds the way they were described to us by donors. Chances are, most are accurately described, but mistakes happen. If no details on the source were provided by donors, we have listed the seed as sourced from a garden rather than from the wild.

Basic information on propagating the seeds will be included when orders are mailed. If seeds have already been stratified (i.e., kept cold), this will be noted on the packet. (Many native seeds require a period of cold dormancy before they will germinate.)

Building a Snake Hibernaculum

by Vince Fiorito

In the Fall 2001 issue of The Blazing Star *(Volume 2, Issue 4), Don Scallen wrote an article about the snake hibernaculum at Willow Park Ecology Centre in Norval, Ontario. NANPS member Vince Fiorito posted the following details to the NANPS website Message Board (www.nanps.org) about how he constructed a snake hibernaculum at the Cornwall Ecology Part in Cornwall, Ontario.*

To build the hibernaculum, I had two tandem truckloads of rocks delivered to the Cornwall Ecology Park. The rocks came from the local town dump. The company that has the contract to dig new garbage pits regularly digs up rocks; about once a month they move them. Once loaded in the truck, the cost to dump them in one place rather than another was $100 per load. Of course, the delivery takes place on their schedule.

Once the rocks were delivered, the city gave me two hours of backhoe time (with an operator) in the park. The backhoe was in the park to do other work. I had the backhoe dig a 12-ft-diameter hole beside the pile of rocks down past the frost line (we went down about five feet). I had the backhoe push rocks (many of which were five to six feet across) into the hole in such a way that it would create as many gaps and crevices as possible yet remain stable. Even though it isn't possible to see down more than two or three feet, the crevices lead from the surface to the bottom. The resulting hibernaculum pile of rocks, referred to by other park contributors as Stonehenge, was the starting point for a rock garden. I have to admit that it does resemble some sort of ancient ruin, so I take the comment as a compliment. I like using rocks as a medium for the garden's foundation because of their natural look and durability. It also creates a vertical component.

As soon as all the biggest rocks were in place, I had two truckloads of topsoil delivered. The garden layout was designed to allow trucks to drop the soil right where it was needed, resulting in the minimum amount of work to get the effect I wanted. The largest rocks on the surface were placed so that people could sit on them comfortably. I wanted the park to be as inviting as possible.

Almost immediately a family of groundhogs moved in and started making alterations. I have no idea what they did below the surface, but a few new openings appeared. I moved more rocks near the new openings so that it would be impossible for someone to accidentally step in a hole, yet so as not to impede the groundhogs' progress.

In the years since, the groundhogs have taken up full-time residence in the Ecology Park. It took two to three years before garter snakes started appearing on a regular basis. A factor contributing to the success of the hibernaculum was a nearby pond built by another park contributor. He used his backhoe time to dig a pit about 20-30 feet in length. He chose a spot where water would normally sit during the spring runoff. The hole was lined with a layer of old newspapers and a used pool liner. About six inches of topsoil was placed on top of the pool liner. The city ran a water main next to the pond and initially used city water to fill it. Since the first year, the pond seems to be able to maintain a constant level on its own. A windmill aerates the pond all year long. The Cornwall Horticultural Society added a wetland extension to the pond. The pond is full of tadpoles and pollywogs each summer. The garter snakes are there because they have food and shelter. Now, they are regularly seen on sunny mornings warming themselves on the rocks. I was hoping black rat snakes would have been sighted by now, but so far no luck. I think the hibernaculum and the park have been successful because they're located next to a strip of undeveloped shoreline on the St. Lawrence River. Obviously, the groundhogs were nearby and took advantage of the opportunity. I think linking or expanding an existing natural area has a better chance of success than creating a natural area in an isolated pocket.

If I were to do it over again, I would have located the hibernaculum closer to the pond or, even better, integrated the two components.

The park is not problem-free. Rocks do tend to attract beer bottles, but I think the area is much improved over the mowed area that used to be there. I've seen mallard ducks feeding in the pond, and each spring clouds of swallows come for mud to build their nests (I assume that's what they are using it for). Wildflowers attact all kinds of bird and insects. A forest of sumac, dogwood, birch, poplar, black walnut and oak has started. It's hard to believe that the area was once a mowed grassy area.

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Continued from page 1

Author's Note: Goldthread flourishes abundantly on our property, which is adjacent to the Mud Lake Wildlife Area near Bailey's Harbor in Door County, Wisconsin. We are surrounded by the most intriguing, untamed conglomeration of utopia one could ever imagine. The Cedar, Tamarack, Black Spruce, Hemlock, Balsam, Birch, Aspen, and White Pine forest hosts a myriad of wildflowers, such as Showy Lady's-Slipper, Yellow Lady's-Slipper, Early Coralroot Orchid, Wild Strawberry, Dwarf Raspberry, Three-Leaved Solomon's Plume, Twinflower, Starflower, Clintonia, Wood Nymph, Purple Gerardia, Brook Lobelia, Pale Spike Lobelia, Blue-Eyed Grass, Fringed Polygala, Grass-of-Parnassus, Hooded and Twisted Lady's Tresses, Fringed Gentian, Bunchberry, Palmate-Leaf Sweet Coltsfoot, Shinleaf and Round-Leaved Pyrola, Northern White Violet, and many more. Royal, Bulblet, Marsh, Cinnamon, Oak, and Maidenhair Fern, Dwarf Horsetail, along with intricate and delicate club mosses, mosses, liverworts, lichens and unusual fungi add to the vast variety of flora. It would be impossible to list the sedges and grasses that are interspersed as well.

In the middle of this paradise is a 3-acre (1.2-ha) open field filled with Indian Paintbrush (*Castilleja coccinea*), several alien species, plus native prairie plants we have introduced. On warm summer days, many species of butterflies (including the Dorcas Copper, Indian and Arctic Skippers), moths, damselflies, skimmers and dragonflies drift along the meandering pathways that we have created through the woods, the open field and around the pond we dug after purchasing the property. This area is also the home of the Hines Emerald Dragonfly, a species listed as federally endangered in the U.S.

My husband, John, and I feel so privileged to own and observe this special "*little corner of the world*," even though we realize it is actually *ours* for just a fleeting moment in time.

Cultivation Information

According to William Cullina's *Growing and Propagating Wildflowers of the United States and Canada*, "Goldthreads are relatively easy to establish in cool climates and damp, acid soils under deciduous or evergreen trees. They put up only one flush of leaves in the spring, so do not worry if your transplants just sit there the first year – underground, they are sending out new rhizomes and roots and should triple in size the following year." Cullina recommends sowing fresh seed outdoors as soon as seed is ripe (mid- to late summer). He also says that it is easy to divide Coptis by lifting individual rosettes along with an inch or two of rhizome in spring, or in summer after it has hardened.

Janice Stiefel is a naturalist, writer and photographer who lives in Door County, Wisconsin. She is the editor of Wisconsin Flora, *published by the Botanical Club of Wisconsin, and the* Wisconsin Entomological Society Newsletter.

Calendar of Events

The NANPS on-line Message Board (www.nanps.org) now lists events. Please e-mail (nanps@nanps.org) information about any native plant events you're involved with; we'd be happy to include your listing on the Message Board.

February 22–23, 2002
8th Annual Xeriscape Conference
Albuquerque, New Mexico
For information, see www.xeriscapenm.com.

March 3–4, 2002
Michigan Wildflower Conference
East Lansing, Michigan
For information, see www.wildflowersmich.org; or contact marjif@iserv.net; (619) 948–2496.

March 15–17, 2002
Sustainable Agriculture: Food for the Future
St. Louis, Missouri
For information, contact the National Association of Environmental Law Students.

April 27–28, 2002
Garry Oak Ecosystem Restoration Conference
Victoria, British Columbia
For information, contact David Polster, (250) 746-8052; D.Polster@telus.net.

May 11, 2002
NANPS Spring Plant Sale
Civic Garden Centre,
Toronto, Ontario
For information, call (416) 631-4438.

Education Corner

The following information is presented by the NANPS Education Committee (Daisy Moore and Cora Thomson).

Plants in Winter

When deciduous trees and shrubs have lost their leaves, they still have distinct characteristics that enable them to be identified in winter. Bark, bud scars, twigs and keys are a few examples of what to look for and what is important for winter identification.

The following guidebooks are useful for winter identification:

Lauren Brown. *Weeds in Winter*. New York: W.W. Norton, 1979.
Michael A. Dirr. *Manual of Woody Landscape Plants*. Champaign, Illinois: Stipes Publishing Co., 1983.
William M. Harlow. *Fruit Key and Twig Key to Trees and Shrubs*. New York: Dover Publications, 1946.
Carol Levine. *A Guide to Wildflowers in Winter*. New Haven, Connecticut: Yale University Press, 1995.

Many herbaceous plants overwinter as evergreen basal leaves. These leaves are distinct and can be used to identify the plant to its genus at least. Here are a few examples of some familiar weeds that overwinter this way: burdock (*Arctium minus*), celandine (*Chelidonium majus*), teasel (*Dipsacus sylvestris*), motherwort (*Leonurus cardiaca*) and dandelion (*Taraxacum officinale*). These should be the first on your weeding list in spring, since they have an early competitive advantage over non-evergreen plants.

Mosses are also usually evergreen and can be found in patches of melted snow in swampy areas and wet meadows. Late winter and early spring are ideal times to divide moss and spread it to other regions in the garden.

In the woodland, many sedges are evergreen and act as a protective groundcover in winter.

Most ferns die back completely over winter, but there are some notable exceptions that are great choices for the winter garden. Evergreen wood fern (*Dryopteris marginalis*), marginal shield fern (*Dryopteris goldiana*), common polypody (*Polypodium vulgare*) and Christmas fern (*Polystichum acrostichoides*) are four examples. Ostrich fern (*Matteuccia struthiopteris*) and sensitive fern (*Onoclea sensibilis*) die back to ground level but the brown-spore stalks remain through the winter.